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U.S. Patent Application No. 09/300,302

Applicants: Gerardo H. Llinas, et al.

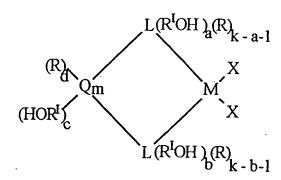
Title: "Preparation and Use of Heterogeneous . . . "

Our Ref.: 617074-8/JP/B-3645

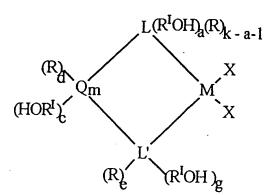
(amended three times) A {heterogeneous} catalytic component obtained by reacting a porous inorganic support with a metallocene compound, wherein the metallocene compound is defined by formula I, II, or III:

 $(LR_k)_z[LR_{k-f}(R^IOH)_f]_xMX_y$ 

I



 $\prod$ , or



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### wherein:

the **L** groups are equal to or different from each other, wherein each **L** is selected from the group consisting of: cyclopentadienyl, indenyl, tetrahydroindenyl, fluorenyl, octahydrofluorenyl, and benzoindenyl;

each  ${\bf R}$  is independently hydrogen, linear or branched  ${\bf C_1-C_{20}}$  alkyl, linear or branched  ${\bf C_3-C_{20}}$  cycloalkyl, linear or branched  ${\bf C_6-C_{20}}$  aryl, linear or branched  ${\bf C_3-C_{20}}$  alkenyl, linear or branched  ${\bf C_7-C_{20}}$  arylalkyl, linear or branched  ${\bf C_7-C_{20}}$  alkylaryl, linear or branched  ${\bf C_8-C_{20}}$  arylalkenyl, or a group  ${\bf SiR^{II}}_3$ , wherein the  ${\bf C_1-C_{20}}$  alkyl, the  ${\bf C_3-C_{20}}$  cycloalkyl, the  ${\bf C_6-C_{20}}$  aryl, the  ${\bf C_3-C_{20}}$  alkenyl, the  ${\bf C_7-C_{20}}$  alkylaryl, and the  ${\bf C_8-C_{20}}$  arylalkenyl are optionally substituted with 1 to 10 halogen atoms;

the **R<sup>I</sup>** groups are equal to or different from each other, wherein each **R<sup>I</sup>** is a divalent aliphatic or aromatic hydrocarbon group containing from 1 to 20 carbon atoms, optionally containing from 1 to 5 heteroatoms of groups 14 to 16 of the Periodic Table of the Elements, and optionally containing boron;

each Q is independently B, C, Si, Ge, or Sn;

M is a lanthanide, an actinide, or a metal of group 3, 4, or 10 of the Periodic Table of the Elements;

each  $\boldsymbol{x}$  is independently hydrogen, chlorine, bromine,  $\text{OR}^{\text{II}},$   $\text{NR}^{\text{II}}_2,$   $\text{C}_1\text{-C}_{20}$  alkyl, or  $\text{C}_6\text{-C}_{20}$  aryl ;

each  $\mathbf{R^{II}}$  is independently linear or branched  $C_1$ - $C_{20}$  alkyl, linear or branched  $C_3$ - $C_{20}$  cycloalkyl, linear or branched  $C_6$ - $C_{20}$  aryl, linear or branched  $C_3$ - $C_{20}$  alkenyl, linear or branched  $C_7$ - $C_{20}$  arylalkyl, linear or branched  $C_7$ - $C_{20}$  arylalkenyl, or linear or branched  $C_7$ - $C_{20}$  alkylaryl;

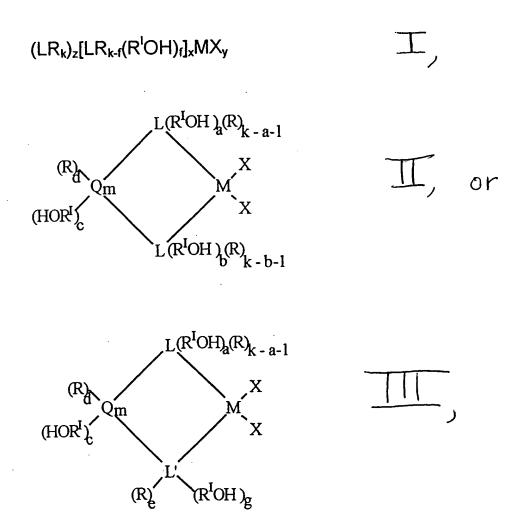
L' is N or 0;

when **L** is cyclopentadienyl, **k** is equal to 5; when **L** is indenyl, **k** is equal to 7; when **L** is fluorenyl or benzoindenyl, **k** is equal to 9; when **L** is tetrahydroindenyl, **k** is equal to 11; and when **L** is octahydrofluorenyl, **k** is equal to 17;

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z is equal to 0, 1, or 2;
\mathbf{x} is equal to 1, 2, or 3;
y is equal to 1, 2, or 3;
x + y + z is equal to {a} the valence of M;
m is equal to 1, 2, 3 or 4;
a is an integer whose value ranges from 0 to k-1;
b is an integer whose value ranges from 0 to k-1;
f is an integer whose value ranges from 1 to k;
g is equal to 0 to 1;
c is equal to 0 or 1;
e is equal to 0 or 1;
\mathbf{a} + \mathbf{b} + \mathbf{c} is at least 1;
\mathbf{a} + \mathbf{g} + \mathbf{c} is at least 1;
d is equal to 0, 1, or 2;
when Q is B, then c + d = 1;
when \mathbf{Q} is C, Si, Ge, or Sn, then \mathbf{c} + \mathbf{d} = 2;
when L' is N, then g + e = 1; {and}
when L' is 0, then g = 0 and e = 0; and
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# wherein each RI in the formulas I and III contains no heteroatoms.

- 2. (amended twice) A {heterogeneous} catalytic component according to claim 1 wherein  $\mathbf{R^I}$  is: linear or branched  $C_1$ - $C_{20}$  alkylene, linear or branched  $C_3$ - $C_{20}$ -cycloalkylene, linear or branched  $C_6$ - $C_{20}$  arylene, linear or branched  $C_7$ - $C_{20}$  alkenyl, linear or branched  $C_7$ - $C_{20}$  arylalkylene, linear or branched  $C_7$ - $C_{20}$  alkylarylene, or a group  $\mathrm{SiR^{II}}_2\{;\}$ .
- 3. (amended twice) A {heterogeneous} catalytic component according to claim 1 wherein  $R^{I}OH$  is  $CH_{2}-CH_{2}OH$ ,  $CH_{2}-CH_{2}-CH_{2}OH$ ,  $O-CH_{2}-CH_{2}OH$ ,  $SiMe_{2}-CH_{2}-CH_{2}OH$ , or  $SiMe_{2}-CH_{2}-CH_{2}OH$ .
- 4. (amended three times) A {heterogeneous} catalytic component according to claim 1 wherein M is titanium, zirconium, or hafnium.
- 5. (amended four times) A {heterogeneous} catalytic component according to claim 1 wherein the inorganic support is previously treated with alumoxane or trialkylaluminum.
- 6. (amended three times) A {heterogeneous} catalytic component obtained by reacting an alumoxane or a trialkylaluminum with a metallocene compound defined by formula I, II, or III:



wherein:

the **L** groups are equal to or different from each other, wherein each **L** is selected from the group consisting of: cyclopentadienyl, indenyl, tetrahydroindenyl, fluorenyl, octahydrofluorenyl, and benzoindenyl;

each  ${\bf R}$  is independently hydrogen, linear or branched  ${\bf C_1}$ - ${\bf C_{20}}$  alkyl, linear or branched  ${\bf C_3}$ - ${\bf C_{20}}$  cycloalkyl, linear or branched  ${\bf C_6}$ - ${\bf C_{20}}$  aryl, linear or branched  ${\bf C_3}$ - ${\bf C_{20}}$  alkenyl, linear or branched  ${\bf C_7}$ - ${\bf C_{20}}$  arylalkyl, linear or branched  ${\bf C_7}$ - ${\bf C_{20}}$  alkylaryl, linear or branched  ${\bf C_8}$ - ${\bf C_{20}}$  arylalkenyl, or a group  ${\bf SiR^{II}_3}$ , wherein the  ${\bf C_1}$ - ${\bf C_{20}}$  alkyl, the  ${\bf C_3}$ - ${\bf C_{20}}$  cycloalkyl, the  ${\bf C_6}$ - ${\bf C_{20}}$  aryl, the  ${\bf C_3}$ - ${\bf C_{20}}$  alkenyl, the  ${\bf C_7}$ - ${\bf C_{20}}$  alkylaryl, and the  ${\bf C_8}$ - ${\bf C_{20}}$  arylalkenyl are optionally substituted with 1 to 10 halogen atoms;

the  $\mathbf{R^I}$  groups are equal to or different from each other, wherein each  $\mathbf{R^I}$  is a divalent aliphatic or aromatic hydrocarbon group containing from 1 to 20 carbon atoms, optionally containing from 1 to 5 heteroatoms of groups 14 to 16 of the Periodic Table of the Elements, and optionally containing boron;

each Q is independently B, C, Si, Ge, or Sn;

M is a lanthanide, an actinide, or a metal of group 3, 4, or 10 of the Periodic Table of the Elements;

each  ${\bf X}$  is independently hydrogen, chlorine, bromine, OR<sup>II</sup>, NR<sup>II</sup><sub>2</sub>, C<sub>1</sub>-C<sub>20</sub> alkyl, or C<sub>6</sub>-C<sub>20</sub> aryl;

each  $\mathbf{R^{II}}$  is independently linear or branched  $C_1$ - $C_{20}$  alkyl, linear or branched  $C_3$ - $C_{20}$  cycloalkyl, linear or branched  $C_6$ - $C_{20}$  aryl, linear or branched  $C_3$ - $C_{20}$  alkenyl, linear or branched  $C_7$ - $C_{20}$  arylalkyl, linear or branched  $C_7$ - $C_{20}$  arylalkenyl, or linear or branched  $C_7$ - $C_{20}$  alkylaryl;

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L' is N or 0:
    when L is cyclopentadienyl, k is equal to 5; when L is
indenyl, k is equal to 7; when L is fluorenyl or benzoindenyl, k
is equal to 9; when L is tetrahydroindenyl, k is equal to 11; and
when L is octahydrofluorenyl, k is equal to 17;
     z is equal to 0, 1, or 2;
     \mathbf{x} is equal to 1, 2, or 3;
     y is equal to 1, 2, or 3;
     x + y + z is equal to {a} the valence of M;
     m is equal to 1, 2, 3 or 4;
     a is an integer whose value ranges from 0 to k-1;
     b is an integer whose value ranges from 0 to k-1;
     f is an integer whose value ranges from 1 to k;
     g is equal to 0 to 1;
     c is equal to 0 or 1;
     e is equal to 0 or 1;
     \mathbf{a} + \mathbf{b} + \mathbf{c} is at least 1;
     a + g + c is at least 1;
     d is equal to 0, 1, or 2;
     when Q is B, then c + d = 1;
     when Q is C, Si, Ge, or Sn, then c + d = 2;
     when L' is N, then g + e = 1; {and}
     when L' is 0, then g = 0 and e = 0; and
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- wherein each RI in the formulas I and III contains no heteroatoms.
- 7. (amended three times) A {heterogeneous} catalytic component according to claim 6 wherein {in} the metallocene compound {at least one L is a fluorenyl or an octahydrofluorenyl ring} is defined by the formula I or the formula II.
- 8. (amended three times) A {heterogeneous catalytic system

comprising the heterogeneous catalytic component <u>as</u> claimed in claim {6} <u>1</u>, wherein {and a cocatalyst selected from the group consisting of: alkylaluminoxane, trilakylaluminum, Lewis acids, and mixtures thereof} the metallocene compound is defined by the formula <u>III</u>.

- 9. (amended twice) A process for polymerization of alpha olefins in a slurry, in a gas phase, in bulk, or in a solution, wherein the polymerization is catalyzed by the catalytic {system} component claimed in claim 8.
- 10. (amended twice) A {heterogeneous} catalytic component according to claim 1 wherein {in} the metallocene compound {at least one L is a fluorenyl or an octahydrofluorenyl ring} is defined by the formula II.
- 11. (amended twice) A {heterogeneous} catalytic system comprising the {heterogeneous} catalytic component claimed in claim 1 and a cocatalyst selected from the group consisting of: an alkylaluminoxane, {trilakylaluminum}, Lewis acids, and mixtures thereof.
- 13. (amended once) A {heterogeneous} catalytic component as claimed in Claim 1, wherein  $\mathbf{R}^{\mathbf{II}}$  is methyl, ethyl, or isopropyl.
- 14. (amended once) A {heterogeneous} catalytic component as claimed in Claim {6, wherein  $\mathbf{R}^{II}$  is methyl, ethyl, or isopropyl} 8, wherein  $\mathbf{c}$  is equal to 1 and  $\mathbf{L}'$  is  $\mathbf{O}$ .
- 15. (amended once) A {heterogeneous} catalytic component as claimed in Claim 1, wherein the metallocene compound is selected

from the group consisting of: bis(2-hydroxyethyl-cyclopentadienyl) zirconium dichloride; (2-hydroxyethyl-cyclopentadienyl)(cyclopentadienyl) zirconium dichloride; (2-hydroxyethyl-cyclopentadienyl)(indenyl) zirconium dichloride; (2-hydroxyethyl-cyclopentadienyl)(2-methyl-indenyl) zirconium dichloride; (2-hydroxyethyl-cyclopentadienyl)(fluorenyl) zirconium dichloride; (2-hydroxyethyl-cyclopentadienyl)(9-methyl-fluorenyl) zirconium dichloride; (2-hydroxyethyl-cyclopentadienyl)(pentamethylcyclopentadienyl) zirconium dichloride; bis(3-hydroxyropyl-cyclopentadienyl) zirconium dichloride; (3-hydroxyropyl-cyclopentadienyl)(cyclopentadienyl) zirconium dichloride; (3-hydroxyropyl-cyclopentadienyl)(indenyl) zirconium dichloride; (3-hydroxyropyl-cyclopentadienyl)(2-methyl-indenyl) zirconium dichloride; (3-hydroxyropyl-cyclopentadienyl)(fluorenyl) zirconium dichloride; (3-hydroxyropyl-cyclopentadienyl)(9-methyl-fluorenyl) zirconium dichloride; (3-hydroxyropyl-cyclopentadienyl)(pentamethylcyclopentadienyl) zirconium dichloride; bis(2-hydroxy-ethoxy-cyclopentadienyl) zirconium dichloride; (2-hydroxy-ethoxy-cyclopentadienyl)(cyclopentadienyl) zirconium dichloride; (2-hydroxy-ethoxy-cyclopentadienyl)(1-indenyl) zirconium dichloride; (2-hydroxy-ethoxy-cyclopentadienyl)(2-methyl-indenyl) zirconium dichloride; (2-hydroxy-ethoxy-cyclopentadienyl)(fluorenyl) zirconium dichloride; (2-hydroxy-ethoxy-cyclopentadienyl)(9-methyl-fluorenyl) zirconium dichloride; (2-hydroxy-ethoxy-cyclopentadienyl)(pentamethylcyclopentadienyl) zirconium dichloride; bis(2-hydroxy-ethyl-(dimethyl)silyl-cyclopentadienyl) zirconium dichloride; (2-hydroxy-ethyl-(dimethyl)silyl-cyclopentadienyl)(cyclopentadienyl) zirconium dichloride; (2-hydroxy-ethyl-(dimethyl)silyl-cyclopentadienyl)(indenyl) zirconium dichloride; (2-hydroxy-ethyl-(dimethyl)silyl-cyclopentadienyl)(2-methyl-indenyl) zirconium dichloride; (2-hydroxy-ethyl-(dimethyl)silyl-cyclopentadienyl)(fluorenyl) zirconium dichloride; (2-hydroxy-ethyl-(dimethyl)silyl-cyclopentadienyl)(9-methyl-fluorenyl) zirconium dichloride; (2-hydroxy-ethyl-(dimethyl)silyl-cyclopentadienyl)(pentamethylcyclopentadienyl) zirconium dichloride; (3-hydroxy-propyl-(dimethyl)silyl-cyclopentadienyl)(cyclopentadienyl) zirconium dichloride; (3-hydroxy-propyl-(dimethyl)silyl-cyclopentadienyl)(indenyl) zirconium dichloride; (3-hydroxy-propyl-(dimethyl)silyl-cyclopentadienyl)(2-methyl-indenyl) zirconium dichloride;

(3-hydroxy-propyl-(dimethyl)silyl-cyclopentadienyl)(fluorenyl) zirconium dichloride;

(3-hydroxy-propyl-(dimethyl)silyl-cyclopentadienyl)(9-methyl-fluorenyl) zirconium dichloride; (3-hydroxy-propyl-(dimethyl)silyl-cyclopentadienyl)(pentamethylcyclopentadienyl) zirconium dichloride;

bis(2-hydroxy-(dimethyl)silyl-cyclopentadienyl) zirconium dichloride; (2-hydroxy-(dimethyl)silyl-cyclopentadienyl)(cyclopentadienyl) zirconium dichloride; dimethylsilandiylbis(2-(2-hydroxyethyl)-cyclopentadienyl) zirconium dichloride; dimethylsilandiyl(3-(2-hydroxyethyl)-cyclopentadienyl) (ciclopentadienil) zirconium dichloride; dimethylsilandiyl(2-(2-hydroxyethyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride; dimethylsilandiyl(3-(2-hydroxyethyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride; dimethylsilandiyl(3-(2-hydroxyethyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride; dimethylsilandiyl(2-(2-hydroxyethyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium

dimethylsilandiyl(3-(2-hydroxyethyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride:

dichloride:

dimethylsilandiyl(2-(2-hydroxyethyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; dimethylsilandiyl(3-(2-hydroxyethyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; dimethylsilandiyl(2-(2-hydroxyethyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxyethyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride:

dimethylsilandiyl(3-(2-hydroxyethyl)-cyclopentadienyl)(1-(2methylbenzoindenyl)) zirconium dichloride;

dimethylsilandiylbis(2-(3-hydroxypropyl)-cyclopentadienyl) zirconium dichloride; dimethylsilandiylbis(3-3-hydroxyropyl-cyclopentadienyl) zirconium dichloride; dimethylsilandiyl(3-3-hydroxyropyl-cyclopentadienyl) (ciclopentadienil) zirconium dichloride; dimethylsilandiyl(2-(3-hydroxypropyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride; dimethylsilandiyl(3-3-hydroxyropyl-cyclopentadienyl)(1-indenyl) zirconium dichloride; dimethylsilandiyl(2-(3-hydroxypropyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

dimethylsilandiyl(3-3-hydroxyropyl-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride; dimethylsilandiyl(2-(3-hydroxyropyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; dimethylsilandiyl(3-3-hydroxyropyl-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; dimethylsilandiyl(2-(3-hydroxypropyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

dimethylsilandiyl(3-3-hydroxyropyl-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

dimethylsilandiyl(3-3-hydroxyropyl-cyclopentadienyl)(1-(2methylbenzoindenyl)) zirconium dichloride;

dimethylsilandiylbis(2-(2-hydroxy)-ethoxy-cyclopentadienyl) zirconium dichloride; dimethylsilandiylbis(3-(2-hydroxy)-ethoxy-cyclopentadienyl) zirconium dichloride;

dimethylsilandiyl(2-(2-hydroxy)-ethoxy-cyclopentadienyl)(1-indenyl) zirconium dichloride; dimethylsilandiyl(3-(2-hydroxy)-ethoxy-cyclopentadienyl)(1-indenyl) zirconium dichloride; dimethylsilandiyl(2-(2-hydroxy)-ethoxy-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride; dichloride;

dimethylsilandiyl(3-(2-hydroxy)-ethoxy-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

dimethylsilandiyl(2-(2-hydroxy)-ethoxy-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; dimethylsilandiyl(3-(2-hydroxy)-ethoxy-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; dimethylsilandiyl(2-(2-hydroxy)-ethoxy-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxy)-ethoxy-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

dimethylsilandiylbis(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl) zirconium dichloride; dimethylsilandiylbis(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl) zirconium dichloride; dimethylsilandiyl(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;

dimethylsilandiyl(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

dimethylsilandiyl(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;

dimethylsilandiyl(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxy-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride; dimethylsilandiyl(3-(2-hydroxy-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methylbenzoindenyl)) zirconium dichloride;

dimethylsilandiylbis(3-(2-hydroxy-(dimethyl)silyl-1-indenyl) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxy-(dimethyl)silyl-1-indenyl) (1-indenyl)zirconium dichloride;

isopropylidenebis(2-(2-hydroxyethyl)-cyclopentadienyl) zirconium dichloride;

isopropylidenebis(3-(2-hydroxyethyl)-cyclopentadienyl) zirconium dichloride;

isopropylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;

isopropylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;

isopropylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;

isopropylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;

isopropylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

isopropylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

isopropylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(1-(2methylbenzoindenyl)) zirconium dichloride;

isopropylidenebis(2-(3-hydroxypropyl)-cyclopentadienyl) zirconium dichloride;

isopropylidenebis(3-(3-hydroxyropyl)-cyclopentadienyl) zirconium dichloride;

isopropylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;

isopropylidene(3-(3-hydroxyropyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;

isopropylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(3-(3-hydroxyropyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;

isopropylidene(3-(3-hydroxyropyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;

isopropylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

isopropylidene(3-(3-hydroxyropyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

isopropylidene(3-(3-hydroxyropyl)-cyclopentadienyl)(1-(2methylbenzoindenyl)) zirconium dichloride;

isopropylidenebis(2-(2-hydroxy-ethoxy)-cyclopentadienyl) zirconium dichloride; isopropylidenebis(3-(2-hydroxy-ethoxy)-cyclopentadienyl) zirconium dichloride; isopropylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-indenyl) zirconium dichloride; isopropylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-indenyl) zirconium dichloride; isopropylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; isopropylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; isopropylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

isopropylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

isopropylidenebis(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl) zirconium dichloride; isopropylidenebis(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl) zirconium dichloride; isopropylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;

isopropylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;

isopropylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-fluorenyl) zirconium

# dichloride;

isopropylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;

isopropylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

isopropylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl))

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zirconium dichloride;
isopropylidene(2-(2-hydroxy-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
isopropylidene(2-(2-hydroxy-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methylbenzoindenyl))
zirconium dichloride;
ethylidenebis(2-(2-hydroxyethyl)-cyclopentadienyl) zirconium dichloride;
ethylidenebis(3-(2-hydroxyethyl)-cyclopentadienyl) zirconium dichloride;
ethylidene(3-(2-hydroxyethyl)-cyclopentadienyl) (cyclopentadienyl) zirconium dichloride;
ethylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
ethylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
ethylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidenebis(2-(3-hydroxypropyl)-cyclopentadienyl) zirconium dichloride;
ethylidenebis(3-(3-hydroxyropyl)-cyclopentadienyl) zirconium dichloride;
ethylidene(3-(3-hydroxyropyl)-cyclopentadienyl) (cyclopentadienyl) zirconium dichloride;
ethylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(3-3-hydroxyropyl-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(3-(3-hydroxyropyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
ethylidene(3-3-hydroxyropyl-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
ethylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidene(3-3-hydroxyropyl-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidenebis(2-(2-hydroxy-ethoxy)-cyclopentadienyl) zirconium dichloride;
ethylidenebis(3-(2-hydroxy-ethoxy)-cyclopentadienyl) zirconium dichloride;
ethylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
ethylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
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ethylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidenebis(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl) zirconium dichloride;
ethylidenebis(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl) zirconium dichloride;
ethylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium
dichloride;
ethylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium
dichloride;
ethylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
ethylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
ethylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl))
zirconium dichloride;
ethylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl))
zirconium dichloride;
dimethylsilandiylbis(1-(2-(2-hydroxyethyl)-indenyl)) zirconium dichloride;
dimethylsilandiylbis(1-(3-(2-hydroxyethyl)-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxyethyl)-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxyethyl)-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxyethyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxyethyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxyethyl)-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxyethyl)-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxyethyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxyethyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilandiylbis(1-(2-(3-hydroxypropyl)-indenyl)) zirconium dichloride;
dimethylsilandiylbis(1-(3-(3-hydroxyropyl)-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(2-(3-hydroxypropyl)-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(3-hydroxyropyl)-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(2-(3-hydroxypropyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(3-(3-hydroxyropyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(2-(3-hydroxypropyl)-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(3-hydroxyropyl)-indenyl))(9-fluorenyl) zirconium dichloride;
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dimethylsilandiyl(1-(2-(3-hydroxypropyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilandiyl(1-(3-(3-hydroxyropyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilandiylbis(1-(2-(2-hydroxy-ethoxy-indenyl)) zirconium dichloride;
dimethylsilandiylbis(1-(3-(2-hydroxy-ethoxy-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethoxy-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethoxy-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethoxy-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethoxy-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethoxy-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethoxy-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethoxy-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethoxy-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilandiylbis(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl)) zirconium dichloride;
dimethylsilandiylbis(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-(2-methyl-indenyl)) zirconium
dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-(2-methyl-indenyl)) zirconium
dichloride:
dimethylsilandiyl(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride;
isopropylidenebis(1-(2-(2-hydroxyethyl)-indenyl)) zirconium dichloride;
isopropylidenebis(1-(3-(2-hydroxyethyl)-indenyl)) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxyethyl)-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxyethyl)-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxyethyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxyethyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxyethyl)-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxyethyl)-indenyl))(9-fluorenyl) zirconium dichloride;
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isopropylidene(1-(2-(2-hydroxyethyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxyethyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
isopropylidenebis(1-(2-(3-hydroxypropyl)-indenyl)) zirconium dichloride;
isopropylidenebis(1-(3-3-hydroxyropyl-indenyl)) zirconium dichloride;
isopropylidene(1-(2-(3-hydroxypropyl)-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(3-3-hydroxyropyl-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(2-(3-hydroxypropyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
isopropylidene(1-(3-3-hydroxyropyl-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
isopropylidene(1-(2-(3-hydroxypropyl)-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(3-3-hydroxyropyl-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(2-(3-hydroxypropyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
isopropylidene(1-(3-3-hydroxyropyl-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
isopropylidenebis(1-(2-(2-hydroxy-ethoxy-indenyl)) zirconium dichloride;
isopropylidenebis(1-(3-(2-hydroxy-ethoxy-indenyl)) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
isopropylidenebis(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl)) zirconium dichloride;
isopropylidenebis(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl)) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-(2-methyl-indenyl)) zirconium
dichloride;
isopropylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-(2-methyl-indenyl)) zirconium
dichloride;
isopropylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride;
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isopropylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride;
ethylidenebis(1-(2-(2-hydroxyethyl)-indenyl)) zirconium dichloride;
ethylidenebis(1-(3-(2-hydroxyethyl)-indenyl)) zirconium dichloride;
ethylidene(1-(2-(2-hydroxyethyl)-indenyl))(1-indenyl) zirconium dichloride;
ethylidene(1-(3-(2-hydroxyethyl)-indenyl))(1-indenyl) zirconium dichloride;
ethylidene(1-(2-(2-hydroxyethyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(1-(3-(2-hydroxyethyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(1-(2-(2-hydroxyethyl)-indenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(1-(3-(2-hydroxyethyl)-indenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(1-(2-(2-hydroxyethyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidene(1-(3-(2-hydroxyethyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidenebis(1-(2-(3-hydroxypropyl)-indenyl)) zirconium dichloride;
ethylidenebis(1-(3-3-hydroxyropyl-indenyl)) zirconium dichloride;
ethylidene(1-(2-(3-hydroxypropyl)-indenyl))(1-indenyl) zirconium dichloride;
ethylidene(1-(3-3-hydroxyropyl-indenyl))(1-indenyl) zirconium dichloride;
ethylidene(1-(2-(3-hydroxypropyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(1-(3-3-hydroxyropyl-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(1-(2-(3-hydroxypropyl)-indenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(1-(3-3-hydroxyropyl-indenyl))(9-fluorenyl) zirconium dichloride;
dichloride:
ethylidenebis(1-(2-(2-hydroxy-ethoxy-indenyl)) zirconium dichloride;
ethylidenebis(1-(3-(2-hydroxy-ethoxy-indenyl)) zirconium dichloride;
ethylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(1-indenyl) zirconium dichloride;
ethylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(1-indenyl) zirconium dichloride;
ethylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidenebis(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl)) zirconium dichloride;
ethylidenebis(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl)) zirconium dichloride;
ethylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-indenyl) zirconium dichloride;
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ethylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-indenyl) zirconium dichloride;
ethylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-(2-methyl-indenyl)) zirconium
dichloride:
ethylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-(2-methyl-indenyl)) zirconium
dichloride;
ethylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride;
ethylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride:
dimethylsilylenebis(9-(1-(2-hydroxyethyl)-fluorenyl)) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxyethyl)-fluorenyl))(cyclopentadienyl) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxyethyl)-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxyethyl)-fluorenyl))(1-indenyl) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxyethyl)-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilylenebis(9-(1-(3-hydroxyropyl)- fluorenyl)) zirconium dichloride;
dimethylsilylene(9-(1-(3-hydroxyropyl)-fluorenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilylene(9-(1-(3-hydroxyropyl)-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilylene(9-(1-(3-hydroxyropyl)-fluorenyl))(1-indenyl) zirconium dichloride;
dimethylsilylene(9-(1-(3-hydroxyropyl)-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride;
dimethylsilylenebis(9-(1-(2-hydroxy-ethoxy)-fluorenyl)) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(1-indenyl) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilylenebis(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl)) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(1-(2-methyl-indenyl)) zirconium
dichloride;
dimethylsilylene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(1-indenyl) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(9-(2-methyl-fluorenyl))
zirconium dichloride;
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isopropylidenebis(9-(1-(2-hydroxyethyl)-fluorenyl)) zirconium dichloride; isopropylidene(9-(1-(2-hydroxyethyl)-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride; isopropylidene(9-(1-(2-hydroxyethyl)-fluorenyl))(1-indenyl) zirconium dichloride; isopropylidene(9-(1-(2-hydroxyethyl)-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride; isopropylidenebis(9-(1-(3-hydroxyropyl)-fluorenyl)) zirconium dichloride; isopropylidene(9-(1-(3-hydroxyropyl)-fluorenyl)) zirconium dichloride; isopropylidene(9-(1-(3-hydroxyropyl)-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride; isopropylidene(9-(1-(3-hydroxyropyl)-fluorenyl))(1-indenyl) zirconium dichloride; isopropylidene(9-(1-(3-hydroxyropyl)-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride; isopropylidenebis(9-(1-(2-hydroxy-ethoxy)-fluorenyl)) zirconium dichloride; isopropylidene(9-(1-(2-hydroxy-ethoxy)-fluorenyl)) zirconium dichloride; isopropylidene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride; isopropylidene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride; isopropylidene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
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isopropylidene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(1-indenyl) zirconium dichloride; isopropylidene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride; isopropylidenebis(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl)) zirconium dichloride; isopropylidene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(9-fluorenyl) zirconium dichloride; isopropylidene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(9-(1-2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(1-indenyl) zirconium dichloride; isopropylidene(9-(1-2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;

ethylidene(9-(1-(2-hydroxyethyl-fluorenyl)) zirconium dichloride; ethylidene(9-(1-(2-hydroxyethyl-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride; ethylidene(9-(1-(2-hydroxyethyl-fluorenyl))(1-indenyl) zirconium dichloride; ethylidene(9-(1-(2-hydroxyethyl-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride; ethylidene(9-(1-(3-hydroxyropyl-fluorenyl)) zirconium dichloride; ethylidene(9-(1-(3-hydroxyropyl-fluorenyl))(9-fluorenyl) zirconium dichloride; ethylidene(9-(1-(3-hydroxyropyl-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride; ethylidene(9-(1-(3-hydroxyropyl-fluorenyl))(1-indenyl) zirconium dichloride; ethylidene(9-(1-(3-hydroxyropyl-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride; ethylidene(9-(1-(2-hydroxy-ethoxy-fluorenyl)) zirconium dichloride;

- ethylidene(9-(1-(2-hydroxy-ethoxy-fluorenyl))(9-fluorenyl) zirconium dichloride; ethylidene(9-(1-(2-hydroxy-ethoxy-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride; ethylidene(9-(1-(2-hydroxy-ethoxy-fluorenyl))(1-indenyl) zirconium dichloride; ethylidene(9-(1-(2-hydroxy-ethoxy-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride; ethylidenebis(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl)) zirconium dichloride; ethylidene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(9-fluorenyl) zirconium dichloride; ethylidene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(1-(2-methyl-indenyl)) zirconium
- ethylidene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(1-indenyl) zirconium dichloride; ethylidene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 2-hydroxyethyl(methyl)silandiylbis(cyclopentadienyl) zirconium dichloride;
- 2-hydroxyethyl(methyl)silandiylbis(9-fluorenyl) zirconium dichloride;

dichloride;

- 2-hydroxyethyl(methyl)silandiyl(cyclopentadienyl)(1-indenyl) zirconium dichloride;
- 2-hydroxyethyl(methyl)silandiyl(cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
- 2-hydroxyethyl(methyl)silandiyl(cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
- 2-hydroxyethyl(methyl)silndiyl(cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 2-hydroxyethyl(methyl)silandiylbis(1-indenyl) zirconium dichloride;
- 2-hydroxyethyl(methyl)silandiyl(cyclopentadienyl)(1-(2-methylbenzoindenyl)) zirconium dichloride;
- 2-hydroxyethyl(methyl)silandiylbis(1-(2-methylbenzoindenyl)) zirconium dichloride;
- 3-hydroxyropyl(methyl)silandiylbis(cyclopentadienyl) zirconium dichloride;
- 3-hydroxyropyl(methyl)silandiylbis(9-fluorenyl) zirconium dichloride;
- 3-hydroxyropyl(methyl)silandiyl(cyclopentadienyl)(1-indenyl) zirconium dichloride;
- 3-hydroxyropyl(methyl)silandiyl(cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
- 3-hydroxyropyl(methyl)silandiyl(cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
- 3-hydroxyropyl(methyl)silandiyl(cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 3-hydroxyropyl(methyl)silandiylbis(1-indenyl) zirconium dichloride;
- 3-hydroxyropyl(methyl)silandiyl(cyclopentadienyl)(1-(2-methylbenzoindenyl)) zirconium dichloride;
- 2-hydroxy-ethoxy(methyl)silandiylbis(cyclopentadienyl) zirconium dichloride;
- 2-hydroxy-ethoxy(methyl)silandiyl(cyclopentadienyl)(1-indenyl) zirconium dichloride;
- 2-hydroxy-ethoxy(methyl)silandiyl(cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
- 2-hydroxy-ethoxy(methyl)silandiyl(cyclopentadienyl)(9-fluorenyl) zirconium dichloride;

- 2-hydroxy-ethoxy(methyl)silandiyl(cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)silandiylbis(cyclopentadienyl) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)silandiyl(cyclopentadienyl)(1-indenyl) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)silandiyl(cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)silandiyl(cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)silandiyl(cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 2-hydroxy-ethoxy-(methyl)methylidenebis(cyclopentadienyl) zirconium dichloride;
- 2-hydroxy-ethoxy-(methyl)methylidene(cyclopentadienyl)(1-indenyl) zirconium dichloride;
- 2-hydroxy-ethoxy-(methyl)methylidene(cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
- 2-hydroxy-ethoxy-(methyl)methylidene(cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
- 2-hydroxy-ethoxy-(methyl)methylidene(cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)methylidenebis(cyclopentadienyl) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)methylidene(cyclopentadienyl)(1-indenyl) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)methylidene(cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)methylidene(cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)methylidene(cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)methylidenebis(1-indenyl) zirconium dichloride;
- 1-(2-hydroxyethyl)-ethylidenebis(cyclopentadienyl) zirconium dichloride;
- 1-(2-hydroxyethyl)-ethylidene-1-(cyclopentadienyl)-2-(1-indenyl) zirconium dichloride;
- 1-(2-hydroxyethyl)-ethylidene-1-(cyclopentadienyl)-2-(1-(2-methyl-indenyl)) zirconium dichloride;
- 1-(2-hydroxyethyl)-ethylidene-1-(cyclopentadienyl)-2-(9-fluorenyl) zirconium dichloride;
- 1-(2-hydroxyethyl)-ethylidene-1-(cyclopentadienyl)-2-(9-(2-methyl-fluorenyl)) zirconium dichloride;

- 1-(2-hydroxyethyl)-ethylidenebis(1-indenyl) zirconium dichloride;
- 1-(3-hydroxypropyl)-ethylidenebis(cyclopentadienyl) zirconium dichloride;
- 1-(3-hydroxypropyl)-ethylidene-1-(cyclopentadienyl)-2-(1-indenyl) zirconium dichloride;
- 1-(3-hydroxypropyl)-ethylidene-1-(cyclopentadienyl)-2-(1-(2-methyl-indenyl)) zirconium dichloride;
- 1-(3-hydroxypropyl)-ethylidene-1-(cyclopentadienyl)-2-(9-fluorenyl) zirconium dichloride;
- 1-(3-hydroxypropyl)-ethylidene-1-(cyclopentadienyl)-2-(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 1-(3-hydroxypropyl)-ethylidenebis(1-indenyl) zirconium dichloride;
- 1-(2-hydroxyethoxy)-ethylidenebis(cyclopentadienyl) zirconium dichloride;
- 1-(2-hydroxyethoxy)-ethylidene-1-(cyclopentadienyl)-2-(1-indenyl) zirconium dichloride;
- 1-(2-hydroxyethoxy)-ethylidene-1-(cyclopentadienyl)-2-(1-(2-methyl-indenyl)) zirconium dichloride;
- 1-(2-hydroxyethoxy)-ethylidene-1-(cyclopentadienyl)-2-(9-fluorenyl) zirconium dichloride;
- 1-(2-hydroxyethoxy)-ethylidene-1-(cyclopentadienyl)-2-(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 1-(2-hydroxyethyl)-(dimethyl)silyl ethylidenebis(cyclopentadienyl) zirconium dichloride;
- 1-(2-hydroxyethyl)-(dimethyl)silyl ethylidene-1-(cyclopentadienyl)-2-(1-indenyl) zirconium dichloride;
- 1-(2-hydroxyethyl)-(dimethyl)silyl ethylidene-1-(cyclopentadienyl)-2-(1-(2-methyl-indenyl)) zirconium dichloride
- 1-(2-hydroxyethyl)-(dimethyl)silyl ethylidene-1-(cyclopentadienyl)-2-(9-fluorenyl) zirconium dichloride;
- 1-(2-hydroxyethyl)-(dimethyl)silyl ethylidene-1-(cyclopentadienyl)-2-(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(cylopentadienyl) titanium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(tetramethylcylopentadienyl) titanium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(1-indenyl) titanium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(1-(2-metthylbenzoindenyl) titanium dichloride; (dimethyl)silandiyl-(tertbutylamido)(3-((2-hydroxyethyl)cylopentadienyl) titanium

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dichloride;
(dimethyl)silandiyl-(tertbutylamido)(1-(3-(2-hydroxyethyl)indenyl) titanium
dichloride;
(dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(cylopentadienyl) titanium dichloride;
(dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(tetramethylcylopentadienyl) titanium dichloride;
(dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(1-indenyl) titanium dichloride;
(dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(9-fluorenyl) titanium dichloride;
(dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(1-(2-methylbenzoindenyl) titanium dichloride;
(3-hydroxypropyl)(methyl)silandiyl(tertbutylamido)-(cylopentadienyl) titanium dichloride;
(3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) titanium
dichloride;
(3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(1-indenyl) titanium dichloride;
(3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
(3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) titanium dichloride;
(3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
(3-hydroxypropyl)(methyl)silandiyl(tertbutylamido)-(1-(2-methylbenzoindenyl) titanium
dichloride;
(dimethyl)silandiyl-(tertbutylamido)(3-((3-hydroxypropyl)cylopentadienyl) titanium
dichloride;
(dimethyl)silandiyl-(tertbutylamido)(1-(3-(3-hydroxypropyl)indenyl) titanium
(dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(cylopentadienyl) titanium
dichloride;
(dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(tetramethylcylopentadienyl) titanium
dichloride;
(dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(1-indenyl) titanium
dichloride;
(dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(9-fluorenyl) titanium
dichloride:
(dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(1-(2-methylbenzoindenyl) titanium
dichloride;
2-hydroxyethyl-methoxy (methyl)silandiyl-(tertbutylamido)(cylopentadienyl) titanium dichloride;
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2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl)

titanium dichloride;

- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(1-indenyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(cylopentadienyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(1-indenyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl(tertbutylamido)-(cylopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(1-indenyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(cylopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(1-indenyl) titanium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(cylopentadienyl) titanium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) titanium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(indenyl) titanium dichloride;

- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(2-methyl-indenyl) titanium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(2-methyl-fluorenyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylene(tertbutylamido)(cylopentadienyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(tertbutylamido)(1-indenyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(-tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(-tertbutylamido)(9-fluorenyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(-tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethoxy)-(methyl)methylene(tertbutylamido)(cylopentadienyl) titanium dichloride;
- (2-hydroxyethoxy)-(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(1-indenyl) titanium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methylene(tertbutylamido)(cylopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl (methyl) methylene (tertbutylamido)
- (tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(1-indenyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(cylopentadienyl) titanium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo-(tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(1-indenyl) titanium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(9-fluorenyl) titanium dichloride;

- (2-hydroxyethyl)(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) titanium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(cylopentadienyl) titanium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) titanium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(1-indenyl) titanium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) titanium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(9-fluorenyl) titanium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl- oxo(cylopentadienyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(1-indenyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(9-fluorenyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(cylopentadienyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(1-indenyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(9-fluorenyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(cylopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(1-indenyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(fluorenyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(9-methylfluorenyl) titanium dichloride
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(tetramethylcylopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(1-indenyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(1-(2-metthylbenzoindenyl) zirconium

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dichloride;
(dimethyl)silandiyl-(tertbutylamido)(3-((2-hydroxyethyl)cylopentadienyl) zirconium
dichloride;
(dimethyl)silandiyl-(tertbutylamido)(1-(3-(2-hydroxyethyl)indenyl) zirconium
dichloride;
(dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(cylopentadienyl) zirconium dichloride;
(dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(tetramethylcylopentadienyl) zirconium dichloride;
(dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(1-indenyl) zirconium dichloride;
(dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(9-fluorenyl) zirconium dichloride;
(dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(1-(2-methylbenzoindenyl) zirconium dichloride;
(3-hydroxypropyl)(methyl)silandiyl(tertbutylamido)-(cylopentadienyl) zirconium dichloride;
(3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) zirconium
dichloride;
(3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(1-indenyl) zirconium dichloride;
(3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
(3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) zirconium dichloride;
(3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
(3-hydroxypropyl)(methyl)silandiyl(tertbutylamido)-(1-(2-methylbenzoindenyl) zirconium
dichloride;
(dimethyl)silandiyl-(tertbutylamido)(3-((3-hydroxypropyl)cylopentadienyl) zirconium
dichloride;
(dimethyl)silandiyl-(tertbutylamido)(1-(3-(3-hydroxypropyl)indenyl) zirconium
dichloride;
(dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(cylopentadienyl) zirconium
dichloride;
(dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(tetramethylcylopentadienyl) zirconium
dichloride;
(dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(1-indenyl) zirconium
dichloride:
(dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(9-fluorenyl) zirconium
dichloride;
(dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(1-(2-methylbenzoindenyl) zirconium
dichloride;
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2-hydroxyethyl-methoxy (methyl)silandiyl-(tertbutylamido)(cylopentadienyl) zirconium dichloride;

- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(1-indenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(1-indenyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl(tertbutylamido)-(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(1-indenyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(1-indenyl) zirconium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;

- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(indenyl) zirconium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(2-methyl-indenyl) zirconium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(2-methyl-fluorenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylene(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(tertbutylamido)(1-indenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(-tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(-tertbutylamido)(9-fluorenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(-tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethoxy)-(methyl)methylene(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethoxy)-(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(1-indenyl) zirconium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methylene(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl (methyl) methylene (tertbutylamido) (tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(1-indenyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(9-fluorenyl) zirconium dichloride;

- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo-(tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(1-indenyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(cylopentadienyl) zirconium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) zirconium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(1-indenyl) zirconium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) zirconium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(9-fluorenyl) zirconium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl- oxo(cylopentadienyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(1-indenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(9-fluorenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(1-indenyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(1-indenyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(fluorenyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(9-methylfluorenyl) zirconium dichloride

ethylidene(1-(3-(3-hydroxypropyl)-indenyl))(cyclopentadienyl) zirconium dichloride; ethylidene(1-(3-(2-hydroxyethyl)-indenyl))(cyclopentadienyl) zirconium dichloride; dimethylsilandiyl(1-(3-(2-hydroxyethyl)-indenyl))(cyclopentadienyl) zirconium dichloride; dimethylsilandiyl(1-(3-(3-hydroxypropyl)-indenyl)) (cyclopentadienyl) zirconium dichloride; isopropylidene(1-(3-(2-hydroxypropyl)-indenyl))(cyclopentadienyl) zirconium dichloride; and isopropylidene(1-(3-(3-hydroxypropyl)-indenyl(cyclopentadienyl) zirconium dichloride.

- 16. (amended once) A {heterogeneous} catalytic component as claimed in Claim 6, wherein the metallocene compound is selected from the group consisting of:
- bis(2-hydroxyethyl-cyclopentadienyl) zirconium dichloride;
- (2-hydroxyethyl-cyclopentadienyl)(cyclopentadienyl) zirconium dichloride;
- (2-hydroxyethyl-cyclopentadienyl)(indenyl) zirconium dichloride;
- (2-hydroxyethyl-cyclopentadienyl)(2-methyl-indenyl) zirconium dichloride;
- (2-hydroxyethyl-cyclopentadienyl)(fluorenyl) zirconium dichloride;
- (2-hydroxyethyl-cyclopentadienyl)(9-methyl-fluorenyl) zirconium dichloride;
- (2-hydroxyethyl-cyclopentadienyl)(pentamethylcyclopentadienyl) zirconium dichloride;
- bis(3-hydroxyropyl-cyclopentadienyl) zirconium dichloride;
- (3-hydroxyropyl-cyclopentadienyl)(cyclopentadienyl) zirconium dichloride;
- (3-hydroxyropyl-cyclopentadienyl)(indenyl) zirconium dichloride;
- (3-hydroxyropyl-cyclopentadienyl)(2-methyl-indenyl) zirconium dichloride;
- (3-hydroxyropyl-cyclopentadienyl)(fluorenyl) zirconium dichloride;
- (3-hydroxyropyl-cyclopentadienyl)(9-methyl-fluorenyl) zirconium dichloride;
- (3-hydroxyropyl-cyclopentadienyl)(pentamethylcyclopentadienyl) zirconium dichloride;
- bis(2-hydroxy-ethoxy-cyclopentadienyl) zirconium dichloride;
- (2-hydroxy-ethoxy-cyclopentadienyl)(cyclopentadienyl) zirconium dichloride;
- (2-hydroxy-ethoxy-cyclopentadienyl)(1-indenyl) zirconium dichloride;
- (2-hydroxy-ethoxy-cyclopentadienyl)(2-methyl-indenyl) zirconium dichloride;
- (2-hydroxy-ethoxy-cyclopentadienyl)(fluorenyl) zirconium dichloride;
- (2-hydroxy-ethoxy-cyclopentadienyl)(9-methyl-fluorenyl) zirconium dichloride;
- (2-hydroxy-ethoxy-cyclopentadienyl)(pentamethylcyclopentadienyl) zirconium dichloride;
- bis(2-hydroxy-ethyl-(dimethyl)silyl-cyclopentadienyl) zirconium dichloride;

- (2-hydroxy-ethyl-(dimethyl)silyl-cyclopentadienyl)(cyclopentadienyl) zirconium dichloride;
- (2-hydroxy-ethyl-(dimethyl)silyl-cyclopentadienyl)(indenyl) zirconium dichloride;
- (2-hydroxy-ethyl-(dimethyl)silyl-cyclopentadienyl)(2-methyl-indenyl) zirconium dichloride;
- (2-hydroxy-ethyl-(dimethyl)silyl-cyclopentadienyl)(fluorenyl) zirconium dichloride;
- (2-hydroxy-ethyl-(dimethyl)silyl-cyclopentadienyl)(9-methyl-fluorenyl) zirconium dichloride;
- (2-hydroxy-ethyl-(dimethyl)silyl-cyclopentadienyl)(pentamethylcyclopentadienyl) zirconium dichloride;
- (3-hydroxy-propyl-(dimethyl)silyl-cyclopentadienyl)(cyclopentadienyl) zirconium dichloride;
- (3-hydroxy-propyl-(dimethyl)silyl-cyclopentadienyl)(indenyl) zirconium dichloride;
- (3-hydroxy-propyl-(dimethyl)silyl-cyclopentadienyl)(2-methyl-indenyl) zirconium dichloride;
- (3-hydroxy-propyl-(dimethyl)silyl-cyclopentadienyl)(fluorenyl) zirconium dichloride;
- (3-hydroxy-propyl-(dimethyl)silyl-cyclopentadienyl)(9-methyl-fluorenyl) zirconium dichloride;
- (3-hydroxy-propyl-(dimethyl)silyl-cyclopentadienyl)(pentamethylcyclopentadienyl) zirconium dichloride;

bis(2-hydroxy-(dimethyl)silyl-cyclopentadienyl) zirconium dichloride;

(2-hydroxy-(dimethyl)silyl-cyclopentadienyl)(cyclopentadienyl) zirconium dichloride;

dimethylsilandiylbis(2-(2-hydroxyethyl)-cyclopentadienyl) zirconium dichloride;

dimethylsilandiylbis(3-(2-hydroxyethyl)-cyclopentadienyl) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxyethyl)-cyclopentadienyl) (ciclopentadienil) zirconium dichloride;

dimethylsilandiyl(2-(2-hydroxyethyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxyethyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;

dimethylsilandiyl(2-(2-hydroxyethyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride:

dimethylsilandiyl(3-(2-hydroxyethyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

dimethylsilandiyl(2-(2-hydroxyethyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; dimethylsilandiyl(3-(2-hydroxyethyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; dimethylsilandiyl(2-(2-hydroxyethyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxyethyl)-cyclopentadienyl)(9-(2-methyl-fluorenýl)) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxyethyl)-cyclopentadienyl)(1-(2methylbenzoindenyl)) zirconium dichloride;

dimethylsilandiylbis(2-(3-hydroxypropyl)-cyclopentadienyl) zirconium dichloride;

dimethylsilandiylbis(3-3-hydroxyropyl-cyclopentadienyl) zirconium dichloride; dimethylsilandiyl(3-3-hydroxyropyl-cyclopentadienyl) (ciclopentadienil) zirconium dichloride; dimethylsilandiyl(2-(3-hydroxypropyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride; dimethylsilandiyl(3-3-hydroxypropyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride; dimethylsilandiyl(2-(3-hydroxypropyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

dimethylsilandiyl(3-3-hydroxyropyl-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride; dimethylsilandiyl(2-(3-hydroxyropyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; dimethylsilandiyl(3-3-hydroxyropyl-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; dimethylsilandiyl(2-(3-hydroxypropyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

dimethylsilandiyl(3-3-hydroxyropyl-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

dimethylsilandiyl(3-3-hydroxyropyl-cyclopentadienyl)(1-(2methylbenzoindenyl)) zirconium dichloride;

dimethylsilandiylbis(2-(2-hydroxy)-ethoxy-cyclopentadienyl) zirconium dichloride; dimethylsilandiylbis(3-(2-hydroxy)-ethoxy-cyclopentadienyl) zirconium dichloride; dimethylsilandiyl(2-(2-hydroxy)-ethoxy-cyclopentadienyl)(1-indenyl) zirconium dichloride; dimethylsilandiyl(3-(2-hydroxy)-ethoxy-cyclopentadienyl)(1-indenyl) zirconium dichloride; dimethylsilandiyl(2-(2-hydroxy)-ethoxy-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxy)-ethoxy-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

dimethylsilandiyl(2-(2-hydroxy)-ethoxy-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; dimethylsilandiyl(3-(2-hydroxy)-ethoxy-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; dimethylsilandiyl(2-(2-hydroxy)-ethoxy-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxy)-ethoxy-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

dimethylsilandiylbis(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl) zirconium dichloride; dimethylsilandiylbis(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl) zirconium dichloride; dimethylsilandiyl(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium

dichloride;

dimethylsilandiyl(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

dimethylsilandiyl(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;

dimethylsilandiyl(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxy-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride; dimethylsilandiyl(3-(2-hydroxy-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methylbenzoindenyl)) zirconium dichloride;

dimethylsilandiylbis(3-(2-hydroxy-(dimethyl)silyl-1-indenyl) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxy-(dimethyl)silyl-1-indenyl) (1-indenyl)zirconium dichloride;

isopropylidenebis(2-(2-hydroxyethyl)-cyclopentadienyl) zirconium dichloride;

isopropylidenebis(3-(2-hydroxyethyl)-cyclopentadienyl) zirconium dichloride;

isopropylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;

isopropylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;

isopropylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;

isopropylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;

isopropylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

isopropylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

isopropylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(1-(2methylbenzoindenyl)) zirconium dichloride;

isopropylidenebis(2-(3-hydroxypropyl)-cyclopentadienyl) zirconium dichloride; isopropylidenebis(3-(3-hydroxyropyl)-cyclopentadienyl) zirconium dichloride;

isopropylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride; isopropylidene(3-(3-hydroxyropyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride; isopropylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(3-(3-hydroxyropyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride; isopropylidene(2-(3-hydroxyropyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; isopropylidene(3-(3-hydroxyropyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; isopropylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

isopropylidene(3-(3-hydroxyropyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

isopropylidene(3-(3-hydroxyropyl)-cyclopentadienyl)(1-(2methylbenzoindenyl)) zirconium dichloride;

isopropylidenebis(2-(2-hydroxy-ethoxy)-cyclopentadienyl) zirconium dichloride; isopropylidenebis(3-(2-hydroxy-ethoxy)-cyclopentadienyl) zirconium dichloride; isopropylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-indenyl) zirconium dichloride; isopropylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-indenyl) zirconium dichloride; isopropylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; isopropylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; isopropylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

isopropylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

isopropylidenebis(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl) zirconium dichloride; isopropylidenebis(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl) zirconium dichloride; isopropylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;

isopropylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;

isopropylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methyl-indenyl))

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zirconium dichloride;
isopropylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methyl-indenyl))
zirconium dichloride;
isopropylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-fluorenyl) zirconium
dichloride;
isopropylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-fluorenyl) zirconium
dichloride:
isopropylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl))
zirconium dichloride;
isopropylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl))
zirconium dichloride;
isopropylidene(2-(2-hydroxy-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
isopropylidene(2-(2-hydroxy-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methylbenzoindenyl))
zirconium dichloride;
ethylidenebis(2-(2-hydroxyethyl)-cyclopentadienyl) zirconium dichloride;
ethylidenebis(3-(2-hydroxyethyl)-cyclopentadienyl) zirconium dichloride;
ethylidene(3-(2-hydroxyethyl)-cyclopentadienyl) (cyclopentadienyl) zirconium dichloride;
ethylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
ethylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
ethylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidenebis(2-(3-hydroxypropyl)-cyclopentadienyl) zirconium dichloride;
ethylidenebis(3-(3-hydroxyropyl)-cyclopentadienyl) zirconium dichloride;
ethylidene(3-(3-hydroxyropyl)-cyclopentadienyl) (cyclopentadienyl) zirconium dichloride;
ethylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(3-3-hydroxyropyl-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(3-(3-hydroxyropyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
ethylidene(3-3-hydroxyropyl-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
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ethylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidene(3-3-hydroxyropyl-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidenebis(2-(2-hydroxy-ethoxy)-cyclopentadienyl) zirconium dichloride;
ethylidenebis(3-(2-hydroxy-ethoxy)-cyclopentadienyl) zirconium dichloride;
ethylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
ethylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
ethylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidenebis(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl) zirconium dichloride;
ethylidenebis(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl) zirconium dichloride;
ethylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium
dichloride;
ethylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium
dichloride;
ethylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
ethylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
ethylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl))
zirconium dichloride;
ethylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl))
zirconium dichloride;
dimethylsilandiylbis(1-(2-(2-hydroxyethyl)-indenyl)) zirconium dichloride;
dimethylsilandiylbis(1-(3-(2-hydroxyethyl)-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxyethyl)-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxyethyl)-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxyethyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxyethyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxyethyl)-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxyethyl)-indenyl))(9-fluorenyl) zirconium dichloride;
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dimethylsilandiyl(1-(2-(2-hydroxyethyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxyethyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilandiylbis(1-(2-(3-hydroxypropyl)-indenyl)) zirconium dichloride;
dimethylsilandiylbis(1-(3-(3-hydroxyropyl)-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(2-(3-hydroxypropyl)-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(3-hydroxyropyl)-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(2-(3-hydroxypropyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(3-(3-hydroxyropyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(2-(3-hydroxypropyl)-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(3-hydroxyropyl)-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(2-(3-hydroxypropyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilandiyl(1-(3-(3-hydroxyropyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilandiylbis(1-(2-(2-hydroxy-ethoxy-indenyl)) zirconium dichloride;
dimethylsilandiylbis(1-(3-(2-hydroxy-ethoxy-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethoxy-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethoxy-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethoxy-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethoxy-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethoxy-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethoxy-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethoxy-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethoxy-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilandiylbis(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl)) zirconium dichloride;
dimethylsilandiylbis(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-(2-methyl-indenyl)) zirconium
dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-(2-methyl-indenyl)) zirconium
dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride;
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dimethylsilandiyl(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride;
isopropylidenebis(1-(2-(2-hydroxyethyl)-indenyl)) zirconium dichloride;
isopropylidenebis(1-(3-(2-hydroxyethyl)-indenyl)) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxyethyl)-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxyethyl)-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxyethyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxyethyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxyethyl)-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxyethyl)-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxyethyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxyethyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
isopropylidenebis(1-(2-(3-hydroxypropyl)-indenyl)) zirconium dichloride;
isopropylidenebis(1-(3-3-hydroxyropyl-indenyl)) zirconium dichloride;
isopropylidene(1-(2-(3-hydroxypropyl)-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(3-3-hydroxyropyl-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(2-(3-hydroxypropyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
isopropylidene(1-(3-3-hydroxyropyl-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
isopropylidene(1-(2-(3-hydroxypropyl)-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(3-3-hydroxyropyl-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(2-(3-hydroxypropyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
isopropylidene(1-(3-3-hydroxyropyl-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
isopropylidenebis(1-(2-(2-hydroxy-ethoxy-indenyl)) zirconium dichloride;
isopropylidenebis(1-(3-(2-hydroxy-ethoxy-indenyl)) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
isopropylidenebis(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl)) zirconium dichloride;
isopropylidenebis(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl)) zirconium dichloride;
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isopropylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-(2-methyl-indenyl)) zirconium
dichloride;
isopropylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-(2-methyl-indenyl)) zirconium
dichloride;
isopropylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride;
isopropylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride;
ethylidenebis(1-(2-(2-hydroxyethyl)-indenyl)) zirconium dichloride;
ethylidenebis(1-(3-(2-hydroxyethyl)-indenyl)) zirconium dichloride;
ethylidene(1-(2-(2-hydroxyethyl)-indenyl))(1-indenyl) zirconium dichloride;
ethylidene(1-(3-(2-hydroxyethyl)-indenyl))(1-indenyl) zirconium dichloride;
ethylidene(1-(2-(2-hydroxyethyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(1-(3-(2-hydroxyethyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(1-(2-(2-hydroxyethyl)-indenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(1-(3-(2-hydroxyethyl)-indenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(1-(2-(2-hydroxyethyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidene(1-(3-(2-hydroxyethyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidenebis(1-(2-(3-hydroxypropyl)-indenyl)) zirconium dichloride;
ethylidenebis(1-(3-3-hydroxyropyl-indenyl)) zirconium dichloride;
ethylidene(1-(2-(3-hydroxypropyl)-indenyl))(1-indenyl) zirconium dichloride;
ethylidene(1-(3-3-hydroxyropyl-indenyl))(1-indenyl) zirconium dichloride;
ethylidene(1-(2-(3-hydroxypropyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(1-(3-3-hydroxyropyl-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(1-(2-(3-hydroxypropyl)-indenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(1-(3-3-hydroxyropyl-indenyl))(9-fluorenyl) zirconium dichloride;
dichloride:
ethylidenebis(1-(2-(2-hydroxy-ethoxy-indenyl)) zirconium dichloride;
ethylidenebis(1-(3-(2-hydroxy-ethoxy-indenyl)) zirconium dichloride;
ethylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(1-indenyl) zirconium dichloride;
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ethylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(1-indenyl) zirconium dichloride;
ethylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidenebis(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl)) zirconium dichloride;
ethylidenebis(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl)) zirconium dichloride;
ethylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-indenyl) zirconium dichloride;
ethylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-indenyl) zirconium dichloride;
ethylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-(2-methyl-indenyl)) zirconium
dichloride;
ethylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-(2-methyl-indenyl)) zirconium
dichloride;
ethylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride;
ethylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-(2-methyl-fluorenyl)) zirconium
dimethylsilylenebis(9-(1-(2-hydroxyethyl)-fluorenyl)) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxyethyl)-fluorenyl))(cyclopentadienyl) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxyethyl)-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxyethyl)-fluorenyl))(1-indenyl) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxyethyl)-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilylenebis(9-(1-(3-hydroxyropyl)- fluorenyl)) zirconium dichloride;
dimethylsilylene(9-(1-(3-hydroxyropyl)-fluorenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilylene(9-(1-(3-hydroxyropyl)-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilylene(9-(1-(3-hydroxyropyl)-fluorenyl))(1-indenyl) zirconium dichloride;
dimethylsilylene(9-(1-(3-hydroxyropyl)-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride;
dimethylsilylenebis(9-(1-(2-hydroxy-ethoxy)-fluorenyl)) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(9-fluorenyl) zirconium dichloride;
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dimethylsilylene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride; dimethylsilylene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(1-indenyl) zirconium dichloride; dimethylsilylene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride; dimethylsilylenebis(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl)) zirconium dichloride; dimethylsilylene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(9-fluorenyl) zirconium dichloride; dimethylsilylene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;

dimethylsilylene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(1-indenyl) zirconium dichloride; dimethylsilylene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;

isopropylidenebis(9-(1-(2-hydroxyethyl)-fluorenyl)) zirconium dichloride;

isopropylidene(9-(1-(2-hydroxyethyl)-fluorenyl))(9-fluorenyl) zirconium dichloride;

isopropylidene(9-(1-(2-hydroxyethyl)-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(9-(1-(2-hydroxyethyl)-fluorenyl))(1-indenyl) zirconium dichloride;

isopropylidene(9-(1-(2-hydroxyethyl)-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;

isopropylidenebis(9-(1-(3-hydroxyropyl)-fluorenyl)) zirconium dichloride;

isopropylidene(9-(1-(3-hydroxyropyl)-fluorenyl))(9-fluorenyl) zirconium dichloride;

isopropylidene(9-(1-(3-hydroxyropyl)-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(9-(1-(3-hydroxyropyl)-fluorenyl))(1-indenyl) zirconium dichloride;

isopropylidene(9-(1-(3-hydroxyropyl)-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;

isopropylidenebis(9-(1-(2-hydroxy-ethoxy)-fluorenyl)) zirconium dichloride;

isopropylidene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(9-fluorenyl) zirconium dichloride;

isopropylidene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(1-indenyl) zirconium dichloride; isopropylidene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride; isopropylidenebis(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl)) zirconium dichloride; isopropylidene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(9-fluorenyl) zirconium dichloride; isopropylidene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(9-(1-2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(1-indenyl) zirconium dichloride; isopropylidene(9-(1-2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;

ethylidenebis(9-(1-(2-hydroxyethyl-fluorenyl)) zirconium dichloride;

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ethylidene(9-(1-(2-hydroxyethyl-fluorenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(9-(1-(2-hydroxyethyl-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(9-(1-(2-hydroxyethyl-fluorenyl))(1-indenyl) zirconium dichloride;
ethylidene(9-(1-(2-hydroxyethyl-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidenebis(9-(1-(3-hydroxyropyl-fluorenyl)) zirconium dichloride;
ethylidene(9-(1-(3-hydroxyropyl-fluorenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(9-(1-(3-hydroxyropyl-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(9-(1-(3-hydroxyropyl-fluorenyl))(1-indenyl) zirconium dichloride;
ethylidene(9-(1-(3-hydroxyropyl-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidenebis(9-(1-(2-hydroxy-ethoxy-fluorenyl)) zirconium dichloride;
ethylidene(9-(1-(2-hydroxy-ethoxy-fluorenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(9-(1-(2-hydroxy-ethoxy-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(9-(1-(2-hydroxy-ethoxy-fluorenyl))(1-indenyl) zirconium dichloride;
ethylidene(9-(1-(2-hydroxy-ethoxy-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidenebis(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl)) zirconium dichloride;
ethylidene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(1-(2-methyl-indenyl)) zirconium
dichloride;
ethylidene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(1-indenyl) zirconium dichloride;
ethylidene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride;
2-hydroxyethyl(methyl)silandiylbis(cyclopentadienyl) zirconium dichloride;
2-hydroxyethyl(methyl)silandiylbis(9-fluorenyl) zirconium dichloride;
2-hydroxyethyl(methyl)silandiyl(cyclopentadienyl)(1-indenyl) zirconium dichloride;
2-hydroxyethyl(methyl)silandiyl(cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
2-hydroxyethyl(methyl)silandiyl(cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
2-hydroxyethyl(methyl)silndiyl(cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
2-hydroxyethyl(methyl)silandiylbis(1-indenyl) zirconium dichloride;
2-hydroxyethyl(methyl)silandiyl(cyclopentadienyl)(1-(2-methylbenzoindenyl)) zirconium
dichloride;
2-hydroxyethyl(methyl)silandiylbis(1-(2-methylbenzoindenyl)) zirconium dichloride;
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3-hydroxyropyl(methyl)silandiylbis(cyclopentadienyl) zirconium dichloride;

3-hydroxyropyl(methyl)silandiyl(cyclopentadienyl)(1-indenyl) zirconium dichloride;

3-hydroxyropyl(methyl)silandiylbis(9-fluorenyl) zirconium dichloride;

- 3-hydroxyropyl(methyl)silandiyl(cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
- 3-hydroxyropyl(methyl)silandiyl(cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
- 3-hydroxyropyl(methyl)silandiyl(cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 3-hydroxyropyl(methyl)silandiylbis(1-indenyl) zirconium dichloride;
- 3-hydroxyropyl(methyl)silandiyl(cyclopentadienyl)(1-(2-methylbenzoindenyl)) zirconium dichloride;
- 2-hydroxy-ethoxy(methyl)silandiylbis(cyclopentadienyl) zirconium dichloride;
- 2-hydroxy-ethoxy(methyl)silandiyl(cyclopentadienyl)(1-indenyl) zirconium dichloride;
- 2-hydroxy-ethoxy(methyl)silandiyl(cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
- 2-hydroxy-ethoxy(methyl)silandiyl(cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
- 2-hydroxy-ethoxy(methyl)silandiyl(cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)silandiylbis(cyclopentadienyl) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)silandiyl(cyclopentadienyl)(1-indenyl) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)silandiyl(cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)silandiyl(cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)silandiyl(cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 2-hydroxy-ethoxy-(methyl)methylidenebis(cyclopentadienyl) zirconium dichloride;
- 2-hydroxy-ethoxy-(methyl)methylidene(cyclopentadienyl)(1-indenyl) zirconium dichloride;
- 2-hydroxy-ethoxy-(methyl)methylidene(cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
- 2-hydroxy-ethoxy-(methyl)methylidene(cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
- 2-hydroxy-ethoxy-(methyl)methylidene(cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)methylidenebis(cyclopentadienyl) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)methylidene(cyclopentadienyl)(1-indenyl) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)methylidene(cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)methylidene(cyclopentadienyl)(9-fluorenyl) zirconium dichloride;

- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)methylidene(cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)methylidenebis(1-indenyl) zirconium dichloride;
- 1-(2-hydroxyethyl)-ethylidenebis(cyclopentadienyl) zirconium dichloride;
- 1-(2-hydroxyethyl)-ethylidene-1-(cyclopentadienyl)-2-(1-indenyl) zirconium dichloride;
- 1-(2-hydroxyethyl)-ethylidene-1-(cyclopentadienyl)-2-(1-(2-methyl-indenyl)) zirconium dichloride;
- 1-(2-hydroxyethyl)-ethylidene-1-(cyclopentadienyl)-2-(9-fluorenyl) zirconium dichloride;
- 1-(2-hydroxyethyl)-ethylidene-1-(cyclopentadienyl)-2-(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 1-(2-hydroxyethyl)-ethylidenebis(1-indenyl) zirconium dichloride;
- 1-(3-hydroxypropyl)-ethylidenebis(cyclopentadienyl) zirconium dichloride;
- 1-(3-hydroxypropyl)-ethylidene-1-(cyclopentadienyl)-2-(1-indenyl) zirconium dichloride;
- 1-(3-hydroxypropyl)-ethylidene-1-(cyclopentadienyl)-2-(1-(2-methyl-indenyl)) zirconium dichloride;
- 1-(3-hydroxypropyl)-ethylidene-1-(cyclopentadienyl)-2-(9-fluorenyl) zirconium dichloride;
- 1-(3-hydroxypropyl)-ethylidene-1-(cyclopentadienyl)-2-(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 1-(3-hydroxypropyl)-ethylidenebis(1-indenyl) zirconium dichloride;
- 1-(2-hydroxyethoxy)-ethylidenebis(cyclopentadienyl) zirconium dichloride;
- 1-(2-hydroxyethoxy)-ethylidene-1-(cyclopentadienyl)-2-(1-indenyl) zirconium dichloride;
- 1-(2-hydroxyethoxy)-ethylidene-1-(cyclopentadienyl)-2-(1-(2-methyl-indenyl)) zirconium dichloride:
- 1-(2-hydroxyethoxy)-ethylidene-1-(cyclopentadienyl)-2-(9-fluorenyl) zirconium dichloride;
- 1-(2-hydroxyethoxy)-ethylidene-1-(cyclopentadienyl)-2-(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 1-(2-hydroxyethyl)-(dimethyl)silyl ethylidenebis(cyclopentadienyl) zirconium dichloride;
- 1-(2-hydroxyethyl)-(dimethyl)silyl ethylidene-1-(cyclopentadienyl)-2-(1-indenyl) zirconium dichloride;
- 1-(2-hydroxyethyl)-(dimethyl)silyl ethylidene-1-(cyclopentadienyl)-2-(1-(2-methyl-indenyl)) zirconium dichloride
- 1-(2-hydroxyethyl)-(dímethyl)silyl ethylidene-1-(cyclopentadienyl)-2-(9-fluorenyl) zirconium dichloride;
- 1-(2-hydroxyethyl)-(dimethyl)silyl ethylidene-1-(cyclopentadienyl)-2-(9-(2-methyl-fluorenyl))

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zirconium dichloride;
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dichloride;

- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(cylopentadienyl) titanium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(tetramethylcylopentadienyl) titanium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(1-indenyl) titanium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(1-(2-metthylbenzoindenyl) titanium dichloride; (dimethyl)silandiyl-(tertbutylamido)(3-((2-hydroxyethyl)cylopentadienyl) titanium
- (dimethyl)silandiyl-(tertbutylamido)(1-(3-(2-hydroxyethyl)indenyl) titanium dichloride;
- (dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(cylopentadienyl) titanium dichloride;
- (dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(tetramethylcylopentadienyl) titanium dichloride;
- (dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(1-indenyl) titanium dichloride;
- (dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(9-fluorenyl) titanium dichloride;
- (dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(1-(2-methylbenzoindenyl) titanium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl(tertbutylamido)-(cylopentadienyl) titanium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) titanium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(1-indenyl) titanium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl(tertbutylamido)-(1-(2-methylbenzoindenyl) titanium dichloride;
- (dimethyl)silandiyl-(tertbutylamido)(3-((3-hydroxypropyl)cylopentadienyl) titanium dichloride;
- (dimethyl)silandiyl-(tertbutylamido)(1-(3-(3-hydroxypropyl)indenyl) titanium dichloride;
- (dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(cylopentadienyl) titanium dichloride;
- (dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(tetramethylcylopentadienyl) titanium

dichloride;

(dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(1-indenyl) titanium

dichloride;

(dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(9-fluorenyl) titanium

dichloride;

(dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(1-(2-methylbenzoindenyl) titanium dichloride:

- 2-hydroxyethyl-methoxy (methyl)silandiyl-(tertbutylamido)(cylopentadienyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(1-indenyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(cylopentadienyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(1-indenyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl(tertbutylamido)-(cylopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(1-indenyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) titanium dichloride; (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(cylopentadienyl) titanium dichloride;

- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(1-indenyl) titanium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(cylopentadienyl) titanium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) titanium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(indenyl) titanium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(2-methyl-indenyl) titanium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(2-methyl-fluorenyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylene(tertbutylamido)(cylopentadienyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(tertbutylamido)(1-indenyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(-tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(-tertbutylamido)(9-fluorenyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(-tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethoxy)-(methyl)methylene(tertbutylamido)(cylopentadienyl) titanium dichloride;
- (2-hydroxyethoxy)-(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(1-indenyl) titanium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methylene(tertbutylamido)(cylopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl (methyl) methylene (tertbutylamido)
- (tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(1-indenyl) titanium dichloride;

- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(cylopentadienyl) titanium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo-(tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(1-indenyl) titanium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(9-fluorenyl) titanium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) titanium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(cylopentadienyl) titanium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) titanium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(1-indenyl) titanium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) titanium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(9-fluorenyl) titanium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl- oxo(cylopentadienyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(1-indenyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(9-fluorenyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(cylopentadienyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(1-indenyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(9-fluorenyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(cylopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(1-indenyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) titanium dichloride;

- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(fluorenyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(9-methylfluorenyl) titanium dichloride
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(tetramethylcylopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(1-indenyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(1-(2-metthylbenzoindenyl) zirconium dichloride;
- (dimethyl)silandiyl-(tertbutylamido)(3-((2-hydroxyethyl)cylopentadienyl) zirconium dichloride;
- (dimethyl)silandiyl-(tertbutylamido)(1-(3-(2-hydroxyethyl)indenyl) zirconium dichloride;
- (dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(cylopentadienyl) zirconium dichloride;
- (dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(tetramethylcylopentadienyl) zirconium dichloride;
- (dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(1-indenyl) zirconium dichloride;
- (dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(9-fluorenyl) zirconium dichloride;
- (dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(1-(2-methylbenzoindenyl) zirconium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl(tertbutylamido)-(cylopentadienyl) zirconium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(1-indenyl) zirconium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl(tertbutylamido)-(1-(2-methylbenzoindenyl) zirconium dichloride;
- (dimethyl)silandiyl-(tertbutylamido)(3-((3-hydroxypropyl)cylopentadienyl) zirconium dichloride;
- (dimethyl)silandiyl-(tertbutylamido)(1-(3-(3-hydroxypropyl)indenyl) zirconium dichloride;
- (dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(cylopentadienyl) zirconium

dichloride;

(dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(tetramethylcylopentadienyl) zirconium dichloride;

(dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(1-indenyl) zirconium dichloride;

(dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(9-fluorenyl) zirconium dichloride;

- (dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(1-(2-methylbenzoindenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy (methyl)silandiyl-(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(1-indenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(1-indenyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl(tertbutylamido)-(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(1-indenyl) zirconium dichloride; (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) zirconium

# dichloride;

- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(1-indenyl) zirconium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(indenyl) zirconium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(2-methyl-indenyl) zirconium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(2-methyl-fluorenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylene(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(tertbutylamido)(1-indenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(-tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(-tertbutylamido)(9-fluorenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(-tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethoxy)-(methyl)methylene(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethoxy)-(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(1-indenyl) zirconium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;

- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methylene(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl (methyl) methylene (tertbutylamido)
- (tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(1-indenyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo-(tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(1-indenyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(cylopentadienyl) zirconium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) zirconium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(1-indenyl) zirconium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) zirconium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(9-fluorenyl) zirconium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl- oxo(cylopentadienyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(1-indenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(9-fluorenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(1-indenyl) zirconium dichloride;

- (2-hydroxyethoxy)(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(1-indenyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(fluorenyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(9-methylfluorenyl) zirconium dichloride
- ethylidene(1-(3-(3-hydroxypropyl)-indenyl))(cyclopentadienyl) zirconium dichloride;
- ethylidene(1-(3-(2-hydroxyethyl)-indenyl))(cyclopentadienyl) zirconium dichloride;
- dimethylsilandiyl(1-(3-(2-hydroxyethyl)-indenyl))(cyclopentadienyl) zirconium dichloride;
- dimethylsilandiyl(1-(3-(3-hydroxypropyl)-indenyl)) (cyclopentadienil) zirconium dichloride;
- isopropylidene(1-(3-(2-hydroxyethyl)-indenyl))(cyclopentadienyl) zirconium dichloride; and
- isopropylidene(1-(3-(3-hydroxypropyl)-indenyl(cyclopentadienyl) zirconium dichloride.
- 17. (amended once) A {heterogeneous} catalytic system as claimed in Claim 8, wherein the metallocene compound is selected from the group consisting of:
- bis(2-hydroxyethyl-cyclopentadienyl) zirconium dichloride;
- (2-hydroxyethyl-cyclopentadienyl)(cyclopentadienyl) zirconium dichloride;
- (2-hydroxyethyl-cyclopentadienyl)(indenyl) zirconium dichloride;
- (2-hydroxyethyl-cyclopentadienyl)(2-methyl-indenyl) zirconium dichloride;
- (2-hydroxyethyl-cyclopentadienyl)(fluorenyl) zirconium dichloride;
- (2-hydroxyethyl-cyclopentadienyl)(9-methyl-fluorenyl) zirconium dichloride;
- (2-hydroxyethyl-cyclopentadienyl)(pentamethylcyclopentadienyl) zirconium dichloride;
- bis(3-hydroxyropyl-cyclopentadienyl) zirconium dichloride;
- (3-hydroxyropyl-cyclopentadienyl)(cyclopentadienyl) zirconium dichloride;
- (3-hydroxyropyl-cyclopentadienyl)(indenyl) zirconium dichloride;
- (3-hydroxyropyl-cyclopentadienyl)(2-methyl-indenyl) zirconium dichloride;
- (3-hydroxyropyl-cyclopentadienyl)(fluorenyl) zirconium dichloride;
- (3-hydroxyropyl-cyclopentadienyl)(9-methyl-fluorenyl) zirconium dichloride;
- (3-hydroxyropyl-cyclopentadienyl)(pentamethylcyclopentadienyl) zirconium dichloride;

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bis(2-hydroxy-ethoxy-cyclopentadienyl) zirconium dichloride;
(2-hydroxy-ethoxy-cyclopentadienyl)(cyclopentadienyl) zirconium dichloride;
(2-hydroxy-ethoxy-cyclopentadienyl)(1-indenyl) zirconium dichloride;
(2-hydroxy-ethoxy-cyclopentadienyl)(2-methyl-indenyl) zirconium dichloride;
(2-hydroxy-ethoxy-cyclopentadienyl)(fluorenyl) zirconium dichloride;
(2-hydroxy-ethoxy-cyclopentadienyl)(9-methyl-fluorenyl) zirconium dichloride;
(2-hydroxy-ethoxy-cyclopentadienyl)(pentamethylcyclopentadienyl) zirconium dichloride;
bis(2-hydroxy-ethyl-(dimethyl)silyl-cyclopentadienyl) zirconium dichloride;
(2-hydroxy-ethyl-(dimethyl)silyl-cyclopentadienyl)(cyclopentadienyl) zirconium dichloride;
(2-hydroxy-ethyl-(dimethyl)silyl-cyclopentadienyl)(indenyl) zirconium dichloride;
(2-hydroxy-ethyl-(dimethyl)silyl-cyclopentadienyl)(2-methyl-indenyl) zirconium dichloride;
(2-hydroxy-ethyl-(dimethyl)silyl-cyclopentadienyl)(fluorenyl) zirconium dichloride;
(2-hydroxy-ethyl-(dimethyl)silyl-cyclopentadienyl)(9-methyl-fluorenyl) zirconium dichloride;
(2-hydroxy-ethyl-(dimethyl)silyl-cyclopentadienyl)(pentamethylcyclopentadienyl) zirconium
dichloride;
(3-hydroxy-propyl-(dimethyl)silyl-cyclopentadienyl)(cyclopentadienyl) zirconium dichloride;
(3-hydroxy-propyl-(dimethyl)silyl-cyclopentadienyl)(indenyl) zirconium dichloride;
(3-hydroxy-propyl-(dimethyl)silyl-cyclopentadienyl)(2-methyl-indenyl) zirconium dichloride;
(3-hydroxy-propyl-(dimethyl)silyl-cyclopentadienyl)(fluorenyl) zirconium dichloride;
(3-hydroxy-propyl-(dimethyl)silyl-cyclopentadienyl)(9-methyl-fluorenyl) zirconium dichloride;
(3-hydroxy-propyl-(dimethyl)silyl-cyclopentadienyl)(pentamethylcyclopentadienyl) zirconium
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bis(2-hydroxy-(dimethyl)silyl-cyclopentadienyl) zirconium dichloride; (2-hydroxy-(dimethyl)silyl-cyclopentadienyl)(cyclopentadienyl) zirconium dichloride; dimethylsilandiylbis(2-(2-hydroxyethyl)-cyclopentadienyl) zirconium dichloride; dimethylsilandiyl(3-(2-hydroxyethyl)-cyclopentadienyl) zirconium dichloride; dimethylsilandiyl(3-(2-hydroxyethyl)-cyclopentadienyl) (ciclopentadienil) zirconium dichloride; dimethylsilandiyl(2-(2-hydroxyethyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride; dimethylsilandiyl(3-(2-hydroxyethyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride; dimethylsilandiyl(2-(2-hydroxyethyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride; dimethylsilandiyl(3-(3-hydroxyethyl)-cyclopentadienyl)(1-(3-methyl-indenyl)) zirconium dichloride;

dichloride;

dimethylsilandiyl(3-(2-hydroxyethyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

dimethylsilandiyl(2-(2-hydroxyethyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxyethyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; dimethylsilandiyl(2-(2-hydroxyethyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxyethyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxyethyl)-cyclopentadienyl)(1-(2methylbenzoindenyl)) zirconium dichloride;

dimethylsilandiylbis(2-(3-hydroxypropyl)-cyclopentadienyl) zirconium dichloride; dimethylsilandiylbis(3-3-hydroxyropyl-cyclopentadienyl) zirconium dichloride; dimethylsilandiyl(3-3-hydroxyropyl-cyclopentadienyl) (ciclopentadienil) zirconium dichloride; dimethylsilandiyl(2-(3-hydroxypropyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride; dimethylsilandiyl(3-3-hydroxypropyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride; dimethylsilandiyl(2-(3-hydroxypropyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

dimethylsilandiyl(3-3-hydroxyropyl-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride; dimethylsilandiyl(2-(3-hydroxyropyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; dimethylsilandiyl(3-3-hydroxyropyl-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; dimethylsilandiyl(2-(3-hydroxypropyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

dimethylsilandiyl(3-3-hydroxyropyl-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

dimethylsilandiyl(3-3-hydroxyropyl-cyclopentadienyl)(1-(2methylbenzoindenyl)) zirconium dichloride;

dimethylsilandiylbis(2-(2-hydroxy)-ethoxy-cyclopentadienyl) zirconium dichloride; dimethylsilandiylbis(3-(2-hydroxy)-ethoxy-cyclopentadienyl) zirconium dichloride; dimethylsilandiyl(2-(2-hydroxy)-ethoxy-cyclopentadienyl)(1-indenyl) zirconium dichloride; dimethylsilandiyl(3-(2-hydroxy)-ethoxy-cyclopentadienyl)(1-indenyl) zirconium dichloride; dimethylsilandiyl(2-(2-hydroxy)-ethoxy-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

dimethylsilandiyl(3-(2-hydroxy)-ethoxy-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

dimethylsilandiyl(2-(2-hydroxy)-ethoxy-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; dimethylsilandiyl(3-(2-hydroxy)-ethoxy-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; dimethylsilandiyl(2-(2-hydroxy)-ethoxy-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium

dichloride; dimethylsilandiyl(3-(2-hydroxy)-ethoxy-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride; dimethylsilandiylbis(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl) zirconium dichloride; dimethylsilandiylbis(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl) zirconium dichloride; dimethylsilandiyl(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride: dimethylsilandiyl(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride; dimethylsilandiyl(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride; dimethylsilandiyl(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride; dimethylsilandiyl(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride: dimethylsilandiyl(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; dimethylsilandiyl(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride; dimethylsilandiyl(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride; dimethylsilandiyl(3-(2-hydroxy-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride; dimethylsilandiyl(3-(2-hydroxy-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methylbenzoindenyl)) zirconium dichloride; dimethylsilandiylbis(3-(2-hydroxy-(dimethyl)silyl-1-indenyl) zirconium dichloride; dimethylsilandiyl(3-(2-hydroxy-(dimethyl)silyl-1-indenyl) (1-indenyl)zirconium dichloride; isopropylidenebis(2-(2-hydroxyethyl)-cyclopentadienyl) zirconium dichloride; isopropylidenebis(3-(2-hydroxyethyl)-cyclopentadienyl) zirconium dichloride; isopropylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride; isopropylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride; isopropylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; isopropylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;

isopropylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

isopropylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

isopropylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(1-(2methylbenzoindenyl)) zirconium dichloride;

isopropylidenebis(2-(3-hydroxypropyl)-cyclopentadienyl) zirconium dichloride; isopropylidenebis(3-(3-hydroxyropyl)-cyclopentadienyl) zirconium dichloride; isopropylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride; isopropylidene(3-(3-hydroxypropyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride; isopropylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(3-(3-hydroxyropyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride; isopropylidene(2-(3-hydroxyropyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; isopropylidene(3-(3-hydroxyropyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; isopropylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

isopropylidene(3-(3-hydroxyropyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

isopropylidene(3-(3-hydroxyropyl)-cyclopentadienyl)(1-(2methylbenzoindenyl)) zirconium dichloride;

isopropylidenebis(2-(2-hydroxy-ethoxy)-cyclopentadienyl) zirconium dichloride; isopropylidenebis(3-(2-hydroxy-ethoxy)-cyclopentadienyl) zirconium dichloride; isopropylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-indenyl) zirconium dichloride; isopropylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-indenyl) zirconium dichloride; isopropylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;

isopropylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; isopropylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; isopropylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

isopropylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium

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dichloride;
isopropylidenebis(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl) zirconium dichloride;
isopropylidenebis(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl) zirconium dichloride;
isopropylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium
dichloride;
isopropylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium
dichloride:
isopropylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methyl-indenyl))
zirconium dichloride;
isopropylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methyl-indenyl))
zirconium dichloride:
isopropylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-fluorenyl) zirconium
dichloride:
isopropylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-fluorenyl) zirconium
dichloride;
isopropylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl))
zirconium dichloride:
isopropylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl))
zirconium dichloride;
isopropylidene(2-(2-hydroxy-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
isopropylidene(2-(2-hydroxy-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methylbenzoindenyl))
zirconium dichloride;
ethylidenebis(2-(2-hydroxyethyl)-cyclopentadienyl) zirconium dichloride;
ethylidenebis(3-(2-hydroxyethyl)-cyclopentadienyl) zirconium dichloride;
ethylidene(3-(2-hydroxyethyl)-cyclopentadienyl) (cyclopentadienyl) zirconium dichloride;
ethylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
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ethylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride; ethylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;

ethylidene(2-(2-hydroxyethyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride; ethylidene(3-(2-hydroxyethyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;

ethylidenebis(2-(3-hydroxypropyl)-cyclopentadienyl) zirconium dichloride;

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ethylidenebis(3-(3-hydroxyropyl)-cyclopentadienyl) zirconium dichloride;
ethylidene(3-(3-hydroxyropyl)-cyclopentadienyl) (cyclopentadienyl) zirconium dichloride;
ethylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(3-3-hydroxyropyl-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(3-(3-hydroxyropyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
ethylidene(3-3-hydroxyropyl-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
ethylidene(2-(3-hydroxypropyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidene(3-3-hydroxyropyl-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidenebis(2-(2-hydroxy-ethoxy)-cyclopentadienyl) zirconium dichloride;
ethylidenebis(3-(2-hydroxy-ethoxy)-cyclopentadienyl) zirconium dichloride;
ethylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
ethylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
ethylidene(2-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidene(3-(2-hydroxy-ethoxy)-cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidenebis(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl) zirconium dichloride;
ethylidenebis(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl) zirconium dichloride;
ethylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-indenyl) zirconium dichloride;
ethylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium
dichloride;
ethylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium
dichloride;
ethylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
ethylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
ethylidene(2-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl))
zirconium dichloride;
ethylidene(3-(2-hydroxy-ethyl-(dimethyl)silyl)-cyclopentadienyl)(9-(2-methyl-fluorenyl))
zirconium dichloride;
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dimethylsilandiylbis(1-(2-(2-hydroxyethyl)-indenyl)) zirconium dichloride;
dimethylsilandiylbis(1-(3-(2-hydroxyethyl)-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxyethyl)-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxyethyl)-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxyethyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxyethyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxyethyl)-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxyethyl)-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxyethyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxyethyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilandiylbis(1-(2-(3-hydroxypropyl)-indenyl)) zirconium dichloride;
dimethylsilandiylbis(1-(3-(3-hydroxyropyl)-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(2-(3-hydroxypropyl)-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(3-hydroxyropyl)-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(2-(3-hydroxypropyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(3-(3-hydroxyropyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(2-(3-hydroxypropyl)-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(3-hydroxyropyl)-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(2-(3-hydroxypropyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilandiyl(1-(3-(3-hydroxyropyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilandiylbis(1-(2-(2-hydroxy-ethoxy-indenyl)) zirconium dichloride;
dimethylsilandiylbis(1-(3-(2-hydroxy-ethoxy-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethoxy-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethoxy-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethoxy-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethoxy-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethoxy-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethoxy-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethoxy-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethoxy-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilandiylbis(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl)) zirconium dichloride;
dimethylsilandiylbis(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl)) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-indenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-indenyl) zirconium dichloride;
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dimethylsilandiyl(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-(2-methyl-indenyl)) zirconium
dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-(2-methyl-indenyl)) zirconium
dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilandiyl(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride;
dimethylsilandiyl(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride;
isopropylidenebis(1-(2-(2-hydroxyethyl)-indenyl)) zirconium dichloride;
isopropylidenebis(1-(3-(2-hydroxyethyl)-indenyl)) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxyethyl)-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxyethyl)-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxyethyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxyethyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxyethyl)-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxyethyl)-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxyethyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxyethyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
isopropylidenebis(1-(2-(3-hydroxypropyl)-indenyl)) zirconium dichloride;
isopropylidenebis(1-(3-3-hydroxyropyl-indenyl)) zirconium dichloride;
isopropylidene(1-(2-(3-hydroxypropyl)-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(3-3-hydroxyropyl-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(2-(3-hydroxypropyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
isopropylidene(1-(3-3-hydroxyropyl-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
isopropylidene(1-(2-(3-hydroxypropyl)-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(3-3-hydroxyropyl-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(2-(3-hydroxypropyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
isopropylidene(1-(3-3-hydroxyropyl-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
isopropylidenebis(1-(2-(2-hydroxy-ethoxy-indenyl)) zirconium dichloride;
isopropylidenebis(1-(3-(2-hydroxy-ethoxy-indenyl)) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(1-indenyl) zirconium dichloride;
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isopropylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(1-indenyl) zirconium dichloride;

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isopropylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
isopropylidenebis(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl)) zirconium dichloride;
isopropylidenebis(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl)) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-indenyl) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-(2-methyl-indenyl)) zirconium
dichloride;
isopropylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-(2-methyl-indenyl)) zirconium
dichloride;
isopropylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride;
isopropylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride;
ethylidenebis(1-(2-(2-hydroxyethyl)-indenyl)) zirconium dichloride;
ethylidenebis(1-(3-(2-hydroxyethyl)-indenyl)) zirconium dichloride;
ethylidene(1-(2-(2-hydroxyethyl)-indenyl))(1-indenyl) zirconium dichloride;
ethylidene(1-(3-(2-hydroxyethyl)-indenyl))(1-indenyl) zirconium dichloride;
ethylidene(1-(2-(2-hydroxyethyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(1-(3-(2-hydroxyethyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(1-(2-(2-hydroxyethyl)-indenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(1-(3-(2-hydroxyethyl)-indenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(1-(2-(2-hydroxyethyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidene(1-(3-(2-hydroxyethyl)-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidenebis(1-(2-(3-hydroxypropyl)-indenyl)) zirconium dichloride;
ethylidenebis(1-(3-3-hydroxyropyl-indenyl)) zirconium dichloride;
ethylidene(1-(2-(3-hydroxypropyl)-indenyl))(1-indenyl) zirconium dichloride;
ethylidene(1-(3-3-hydroxyropyl-indenyl))(1-indenyl) zirconium dichloride;
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ethylidene(1-(2-(3-hydroxypropyl)-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(1-(3-3-hydroxyropyl-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(1-(2-(3-hydroxypropyl)-indenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(1-(3-3-hydroxyropyl-indenyl))(9-fluorenyl) zirconium dichloride;
dichloride;
ethylidenebis(1-(2-(2-hydroxy-ethoxy-indenyl)) zirconium dichloride;
ethylidenebis(1-(3-(2-hydroxy-ethoxy-indenyl)) zirconium dichloride;
ethylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(1-indenyl) zirconium dichloride;
ethylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(1-indenyl) zirconium dichloride;
ethylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(1-(2-(2-hydroxy-ethoxy-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidene(1-(3-(2-hydroxy-ethoxy-indenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidenebis(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl)) zirconium dichloride;
ethylidenebis(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl)) zirconium dichloride;
ethylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-indenyl) zirconium dichloride;
ethylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-indenyl) zirconium dichloride;
ethylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-(2-methyl-indenyl)) zirconium
dichloride:
ethylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(1-(2-methyl-indenyl)) zirconium
dichloride:
ethylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(1-(2-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride:
ethylidene(1-(3-(2-hydroxy-ethyl-(dimethyl)silyl-indenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride:
dimethylsilylenebis(9-(1-(2-hydroxyethyl)-fluorenyl)) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxyethyl)-fluorenyl))(cyclopentadienyl) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxyethyl)-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxyethyl)-fluorenyl))(1-indenyl) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxyethyl)-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
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### APPENDIX\_B

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dimethylsilylenebis(9-(1-(3-hydroxyropyl)- fluorenyl)) zirconium dichloride;
dimethylsilylene(9-(1-(3-hydroxyropyl)-fluorenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilylene(9-(1-(3-hydroxyropyl)-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilylene(9-(1-(3-hydroxyropyl)-fluorenyl))(1-indenyl) zirconium dichloride;
dimethylsilylene(9-(1-(3-hydroxyropyl)-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride;
dimethylsilylenebis(9-(1-(2-hydroxy-ethoxy)-fluorenyl)) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(1-indenyl) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
dimethylsilylenebis(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl)) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(9-fluorenyl) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(1-(2-methyl-indenyl)) zirconium
dichloride:
dimethylsilylene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(1-indenyl) zirconium dichloride;
dimethylsilylene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(9-(2-methyl-fluorenyl))
zirconium dichloride;
isopropylidenebis(9-(1-(2-hydroxyethyl)-fluorenyl)) zirconium dichloride;
isopropylidene(9-(1-(2-hydroxyethyl)-fluorenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(9-(1-(2-hydroxyethyl)-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
isopropylidene(9-(1-(2-hydroxyethyl)-fluorenyl))(1-indenyl) zirconium dichloride;
isopropylidene(9-(1-(2-hydroxyethyl)-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
isopropylidenebis(9-(1-(3-hydroxyropyl)-fluorenyl)) zirconium dichloride;
isopropylidene(9-(1-(3-hydroxyropyl)-fluorenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(9-(1-(3-hydroxyropyl)-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
isopropylidene(9-(1-(3-hydroxyropyl)-fluorenyl))(1-indenyl) zirconium dichloride;
isopropylidene(9-(1-(3-hydroxyropyl)-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
isopropylidenebis(9-(1-(2-hydroxy-ethoxy)-fluorenyl)) zirconium dichloride;
isopropylidene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
isopropylidene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(1-indenyl) zirconium dichloride;
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isopropylidene(9-(1-(2-hydroxy-ethoxy)-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;

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isopropylidenebis(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl)) zirconium dichloride:
isopropylidene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(9-fluorenyl) zirconium dichloride;
isopropylidene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(1-(2-methyl-indenyl)) zirconium
dichloride;
isopropylidene(9-(1-2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(1-indenyl) zirconium dichloride;
isopropylidene(9-(1-2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride;
ethylidenebis(9-(1-(2-hydroxyethyl-fluorenyl)) zirconium dichloride;
ethylidene(9-(1-(2-hydroxyethyl-fluorenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(9-(1-(2-hydroxyethyl-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(9-(1-(2-hydroxyethyl-fluorenyl))(1-indenyl) zirconium dichloride;
ethylidene(9-(1-(2-hydroxyethyl-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidenebis(9-(1-(3-hydroxyropyl-fluorenyl)) zirconium dichloride;
ethylidene(9-(1-(3-hydroxyropyl-fluorenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(9-(1-(3-hydroxyropyl-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(9-(1-(3-hydroxyropyl-fluorenyl))(1-indenyl) zirconium dichloride;
ethylidene(9-(1-(3-hydroxyropyl-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidenebis(9-(1-(2-hydroxy-ethoxy-fluorenyl)) zirconium dichloride;
ethylidene(9-(1-(2-hydroxy-ethoxy-fluorenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(9-(1-(2-hydroxy-ethoxy-fluorenyl))(1-(2-methyl-indenyl)) zirconium dichloride;
ethylidene(9-(1-(2-hydroxy-ethoxy-fluorenyl))(1-indenyl) zirconium dichloride;
ethylidene(9-(1-(2-hydroxy-ethoxy-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium dichloride;
ethylidenebis(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl)) zirconium dichloride;
ethylidene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(9-fluorenyl) zirconium dichloride;
ethylidene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(1-(2-methyl-indenyl)) zirconium
dichloride;
ethylidene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(1-indenyl) zirconium dichloride;
ethylidene(9-(1-(2-hydroxy-ethyl-(dimethyl)silyl-fluorenyl))(9-(2-methyl-fluorenyl)) zirconium
dichloride;
2-hydroxyethyl(methyl)silandiylbis(cyclopentadienyl) zirconium dichloride;
2-hydroxyethyl(methyl)silandiylbis(9-fluorenyl) zirconium dichloride;
2-hydroxyethyl(methyl)silandiyl(cyclopentadienyl)(1-indenyl) zirconium dichloride;
2-hydroxyethyl(methyl)silandiyl(cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
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2-hydroxyethyl(methyl)silandiyl(cyclopentadienyl)(9-fluorenyl) zirconium dichloride;

- 2-hydroxyethyl(methyl)silndiyl(cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 2-hydroxyethyl(methyl)silandiylbis(1-indenyl) zirconium dichloride;
- 2-hydroxyethyl(methyl)silandiyl(cyclopentadienyl)(1-(2-methylbenzoindenyl)) zirconium dichloride:
- 2-hydroxyethyl(methyl)silandiylbis(1-(2-methylbenzoindenyl)) zirconium dichloride;
- 3-hydroxyropyl(methyl)silandiylbis(cyclopentadienyl) zirconium dichloride;
- 3-hydroxyropyl(methyl)silandiylbis(9-fluorenyl) zirconium dichloride;
- 3-hydroxyropyl(methyl)silandiyl(cyclopentadienyl)(1-indenyl) zirconium dichloride;
- 3-hydroxyropyl(methyl)silandiyl(cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
- 3-hydroxyropyl(methyl)silandiyl(cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
- 3-hydroxyropyl(methyl)silandiyl(cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 3-hydroxyropyl(methyl)silandiylbis(1-indenyl) zirconium dichloride;
- 3-hydroxyropyl(methyl)silandiyl(cyclopentadienyl)(1-(2-methylbenzoindenyl)) zirconium dichloride;
- 2-hydroxy-ethoxy(methyl)silandiylbis(cyclopentadienyl) zirconium dichloride;
- 2-hydroxy-ethoxy(methyl)silandiyl(cyclopentadienyl)(1-indenyl) zirconium dichloride;
- 2-hydroxy-ethoxy(methyl)silandiyl(cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
- 2-hydroxy-ethoxy(methyl)silandiyl(cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
- 2-hydroxy-ethoxy(methyl)silandiyl(cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)silandiylbis(cyclopentadienyl) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)silandiyl(cyclopentadienyl)(1-indenyl) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)silandiyl(cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)silandiyl(cyclopentadienyl)(9-fluorenyl) zirconium dichloride:
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)silandiyl(cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 2-hydroxy-ethoxy-(methyl)methylidenebis(cyclopentadienyl) zirconium dichloride;
- 2-hydroxy-ethoxy-(methyl)methylidene(cyclopentadienyl)(1-indenyl) zirconium dichloride;
- 2-hydroxy-ethoxy-(methyl)methylidene(cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
- 2-hydroxy-ethoxy-(methyl)methylidene(cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
- 2-hydroxy-ethoxy-(methyl)methylidene(cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium

# dichloride;

- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)methylidenebis(cyclopentadienyl) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)methylidene(cyclopentadienyl)(1-indenyl) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)methylidene(cyclopentadienyl)(1-(2-methyl-indenyl)) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)methylidene(cyclopentadienyl)(9-fluorenyl) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)methylidene(cyclopentadienyl)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 2-hydroxy-ethyl-(dimethyl)silyl-(methyl)methylidenebis(1-indenyl) zirconium dichloride;
- 1-(2-hydroxyethyl)-ethylidenebis(cyclopentadienyl) zirconium dichloride;
- 1-(2-hydroxyethyl)-ethylidene-1-(cyclopentadienyl)-2-(1-indenyl) zirconium dichloride;
- 1-(2-hydroxyethyl)-ethylidene-1-(cyclopentadienyl)-2-(1-(2-methyl-indenyl)) zirconium dichloride;
- 1-(2-hydroxyethyl)-ethylidene-1-(cyclopentadienyl)-2-(9-fluorenyl) zirconium dichloride;
- 1-(2-hydroxyethyl)-ethylidene-1-(cyclopentadienyl)-2-(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 1-(2-hydroxyethyl)-ethylidenebis(1-indenyl) zirconium dichloride;
- 1-(3-hydroxypropyl)-ethylidenebis(cyclopentadienyl) zirconium dichloride;
- 1-(3-hydroxypropyl)-ethylidene-1-(cyclopentadienyl)-2-(1-indenyl) zirconium dichloride;
- 1-(3-hydroxypropyl)-ethylidene-1-(cyclopentadienyl)-2-(1-(2-methyl-indenyl)) zirconium dichloride;
- 1-(3-hydroxypropyl)-ethylidene-1-(cyclopentadienyl)-2-(9-fluorenyl) zirconium dichloride;
- 1-(3-hydroxypropyl)-ethylidene-1-(cyclopentadienyl)-2-(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 1-(3-hydroxypropyl)-ethylidenebis(1-indenyl) zirconium dichloride;
- 1-(2-hydroxyethoxy)-ethylidenebis(cyclopentadienyl) zirconium dichloride;
- 1-(2-hydroxyethoxy)-ethylidene-1-(cyclopentadienyl)-2-(1-indenyl) zirconium dichloride;
- 1-(2-hydroxyethoxy)-ethylidene-1-(cyclopentadienyl)-2-(1-(2-methyl-indenyl)) zirconium dichloride;
- 1-(2-hydroxyethoxy)-ethylidene-1-(cyclopentadienyl)-2-(9-fluorenyl) zirconium dichloride;
- 1-(2-hydroxyethoxy)-ethylidene-1-(cyclopentadienyl)-2-(9-(2-methyl-fluorenyl)) zirconium dichloride;

- 1-(2-hydroxyethyl)-(dimethyl)silyl ethylidenebis(cyclopentadienyl) zirconium dichloride;
- 1-(2-hydroxyethyl)-(dimethyl)silyl ethylidene-1-(cyclopentadienyl)-2-(1-indenyl) zirconium dichloride;
- 1-(2-hydroxyethyl)-(dimethyl)silyl ethylidene-1-(cyclopentadienyl)-2-(1-(2-methyl-indenyl)) zirconium dichloride
- 1-(2-hydroxyethyl)-(dimethyl)silyl ethylidene-1-(cyclopentadienyl)-2-(9-fluorenyl) zirconium dichloride;
- 1-(2-hydroxyethyl)-(dimethyl)silyl ethylidene-1-(cyclopentadienyl)-2-(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(cylopentadienyl) titanium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(tetramethylcylopentadienyl) titanium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(1-indenyl) titanium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(1-(2-metthylbenzoindenyl) titanium dichloride; (dimethyl)silandiyl-(tertbutylamido)(3-((2-hydroxyethyl)cylopentadienyl) titanium dichloride;
- (dimethyl)silandiyl-(tertbutylamido)(1-(3-(2-hydroxyethyl)indenyl) titanium dichloride;
- (dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(cylopentadienyl) titanium dichloride;
- (dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(tetramethylcylopentadienyl) titanium dichloride;
- (dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(1-indenyl) titanium dichloride;
- (dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(9-fluorenyl) titanium dichloride;
- (dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(1-(2-methylbenzoindenyl) titanium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl(tertbutylamido)-(cylopentadienyl) titanium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) titanium dichloride:
- (3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(1-indenyl) titanium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl(tertbutylamido)-(1-(2-methylbenzoindenyl) titanium

dichloride;

(dimethyl)silandiyl-(tertbutylamido)(3-((3-hydroxypropyl)cylopentadienyl) titanium dichloride;

(dimethyl)silandiyl-(tertbutylamido)(1-(3-(3-hydroxypropyl)indenyl) titanium dichloride:

(dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(cylopentadienyl) titanium dichloride;

(dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(tetramethylcylopentadienyl) titanium dichloride;

(dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(1-indenyl) titanium dichloride;

(dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(9-fluorenyl) titanium dichloride:

(dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(1-(2-methylbenzoindenyl) titanium dichloride;

- 2-hydroxyethyl-methoxy (methyl)silandiyl-(tertbutylamido)(cylopentadienyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(1-indenyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(cylopentadienyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(1-indenyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl(tertbutylamido)-(cylopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl)

# titanium dichloride;

- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(1-indenyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(cylopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(1-indenyl) titanium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(cylopentadienyl) titanium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) titanium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(indenyl) titanium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(2-methyl-indenyl) titanium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(2-methyl-fluorenyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylene(tertbutylamido)(cylopentadienyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(tertbutylamido)(1-indenyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(-tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(-tertbutylamido)(9-fluorenyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(-tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethoxy)-(methyl)methylene(tertbutylamido)(cylopentadienyl) titanium dichloride;
- (2-hydroxyethoxy)-(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(1-indenyl) titanium dichloride;

#### APPENDIX\_B

- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methylene(tertbutylamido)(cylopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl (methyl) methylene (tertbutylamido)
- (tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(1-indenyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(9-fluorenyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(9-(2-methyl-fluorenyl)) titanium dichloride:
- (2-hydroxyethyl)(methyl) silandiyl-oxo(cylopentadienyl) titanium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo-(tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(1-indenyl) titanium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(9-fluorenyl) titanium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) titanium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(cylopentadienyl) titanium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) titanium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(1-indenyl) titanium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) titanium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(9-fluorenyl) titanium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl- oxo(cylopentadienyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(1-indenyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(9-fluorenyl) titanium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(cylopentadienyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(1-indenyl) titanium dichloride;

- (2-hydroxyethoxy)(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(9-fluorenyl) titanium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(cylopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(1-indenyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(fluorenyl) titanium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(9-methylfluorenyl) titanium dichloride
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(tetramethylcylopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(1-indenyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethyl)(methyl)silandiyl-(tertbutylamido)(1-(2-metthylbenzoindenyl) zirconium dichloride:
- (dimethyl)silandiyl-(tertbutylamido)(3-((2-hydroxyethyl)cylopentadienyl) zirconium dichloride:
- (dimethyl)silandiyl-(tertbutylamido)(1-(3-(2-hydroxyethyl)indenyl) zirconium dichloride;
- (dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(cylopentadienyl) zirconium dichloride;
- (dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(tetramethylcylopentadienyl) zirconium dichloride;
- (dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(1-indenyl) zirconium dichloride;
- (dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(9-fluorenyl) zirconium dichloride;
- (dimethyl)silandiyl-(2-(2-hydroxyethyl)amido)(1-(2-methylbenzoindenyl) zirconium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl(tertbutylamido)-(cylopentadienyl) zirconium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(1-indenyl) zirconium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) zirconium dichloride;

- (3-hydroxypropyl)(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (3-hydroxypropyl)(methyl)silandiyl(tertbutylamido)-(1-(2-methylbenzoindenyl) zirconium dichloride;
- (dimethyl)silandiyl-(tertbutylamido)(3-((3-hydroxypropyl)cylopentadienyl) zirconium dichloride:
- (dimethyl)silandiyl-(tertbutylamido)(1-(3-(3-hydroxypropyl)indenyl) zirconium dichloride;
- (dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(cylopentadienyl) zirconium dichloride;
- (dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(tetramethylcylopentadienyl) zirconium dichloride;
- (dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(1-indenyl) zirconium dichloride;
- (dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(9-fluorenyl) zirconium dichloride;
- (dimethyl)silandiyl-(3-(3-hydroxypropyl)amido)(1-(2-methylbenzoindenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy (methyl)silandiyl-(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(1-indenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride:
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(1-indenyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;

- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl(tertbutylamido)-(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(1-indenyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)silandiyl-(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(1-indenyl) zirconium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethyl)-(methyl)methylene(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(indenyl) zirconium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(2-methyl-indenyl) zirconium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- (3-hydroxypropyl)-(methyl)methylene(tertbutylamido)(2-methyl-fluorenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylene(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(tertbutylamido)(1-indenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(-tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(-tertbutylamido)(9-fluorenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl)methylen(-tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium

### dichloride;

- (2-hydroxyethoxy)-(methyl)methylene(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethoxy)-(methyl)methylene(tertbutylamido)(tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(1-indenyl) zirconium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethoxy)-(methyl)methylen(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methylene(tertbutylamido)(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl (methyl) methylene (tertbutylamido)
- (tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(1-indenyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(1-(2-methyl-indenyl)) zirconium dichloride:
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl)methilene(tertbutylamido)(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo-(tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(1-indenyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethyl)(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(cylopentadienyl) zirconium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) zirconium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(1-indenyl) zirconium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) zirconium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(9-fluorenyl) zirconium dichloride;
- (3-hydroxypropyl)(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl- oxo(cylopentadienyl) zirconium dichloride;

- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(1-indenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(9-fluorenyl) zirconium dichloride;
- 2-hydroxyethyl-methoxy(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(1-indenyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(9-fluorenyl) zirconium dichloride;
- (2-hydroxyethoxy)(methyl) silandiyl-oxo(9-(2-methyl-fluorenyl)) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(cylopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(tetramethylcyclopentadienyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(1-indenyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(1-(2-methyl-indenyl)) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(fluorenyl) zirconium dichloride;
- (2-hydroxyethyl)-(dimethyl)silyl-(methyl) silandiyl-oxo(9-methylfluorenyl) zirconium dichloride

ethylidene(1-(3-(3-hydroxypropyl)-indenyl))(cyclopentadienyl) zirconium dichloride;

ethylidene(1-(3-(2-hydroxyethyl)-indenyl))(cyclopentadienyl) zirconium dichloride;

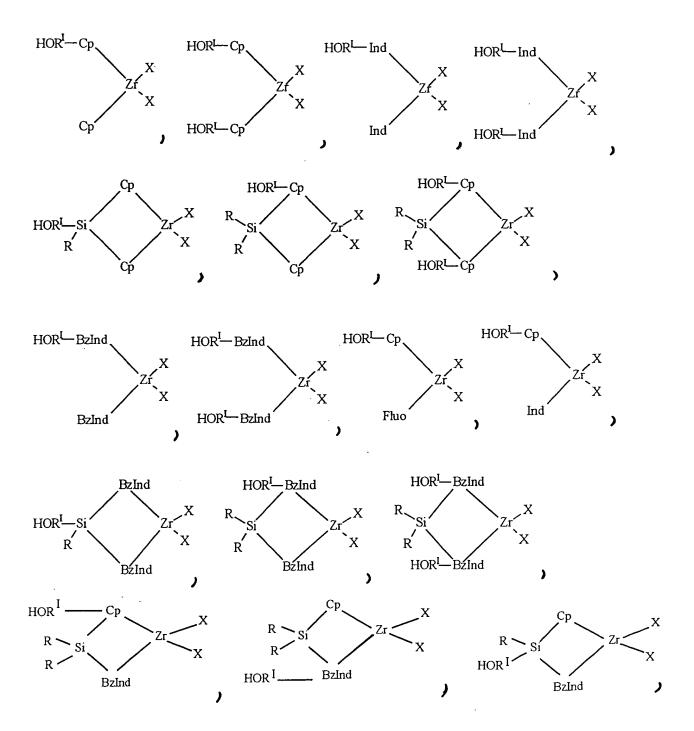
dimethylsilandiyl(1-(3-(2-hydroxyethyl)-indenyl))(cyclopentadienyl) zirconium dichloride;

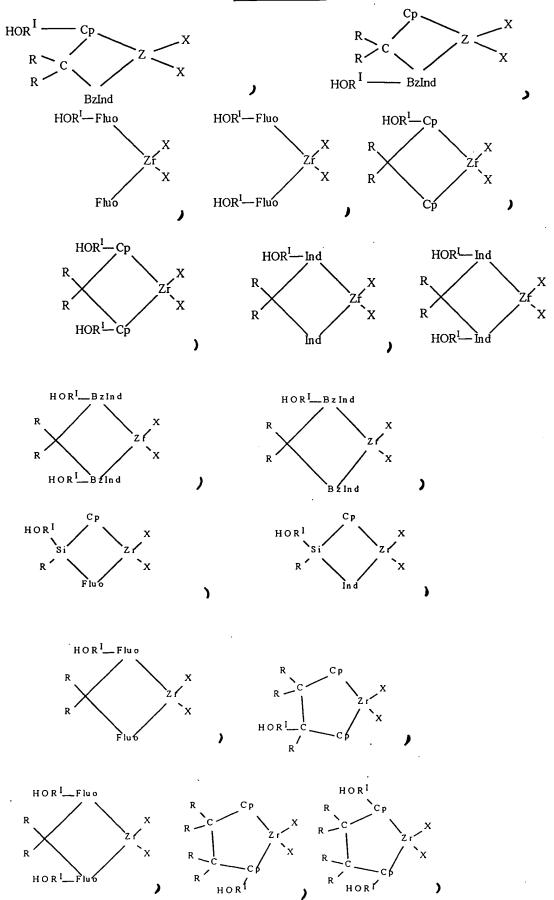
dimethylsilandiyl(1-(3-(3-hydroxypropyl)-indenyl)) (cyclopentadienil) zirconium dichloride;

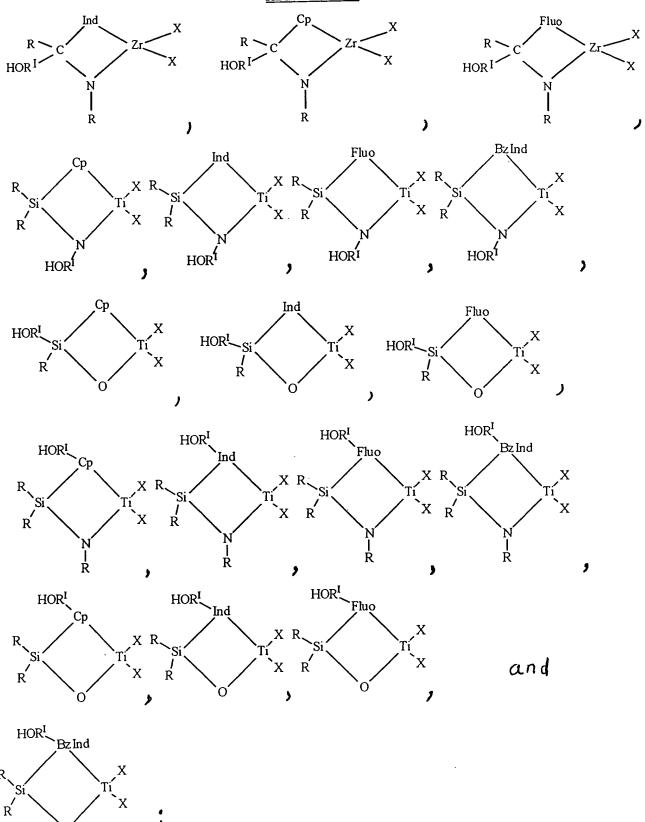
isopropylidene(1-(3-(2-hydroxyethyl)-indenyl))(cyclopentadienyl) zirconium dichloride; and

isopropylidene(1-(3-(3-hydroxypropyl)-indenyl(cyclopentadienyl) zirconium dichloride.

18. (amended once) A {heterogeneous} catalytic component as claimed in Claim 1, wherein the metallocene compound is selected from the group consisting of:







wherein:

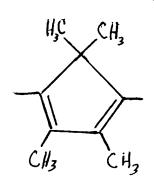
 $\{C_p\}$   $C_p$  is cyclopentadienyl optionally substituted with  $C_1$ - $C_{20}$  alkyl,  $C_3$ - $C_{20}$  cycloalkyl,  $C_6$ - $C_{20}$  aryl,  $C_3$ - $C_{20}$  alkenyl,  $C_7$ - $C_{20}$  arylalkyl,  $C_8$ - $C_{20}$  arylalkenyl, or  $C_7$ - $C_{20}$  alkylaryl;

Ind is indenyl optionally substituted with  $C_1$ - $C_{20}$  alkyl,  $C_3$ - $C_{20}$  cycloalkyl,  $C_6$ - $C_{20}$  aryl,  $C_3$ - $C_{20}$  alkenyl,  $C_7$ - $C_{20}$  arylalkyl,  $C_8$ - $C_{20}$  arylalkenyl, or  $C_7$ - $C_{20}$  alkylaryl;

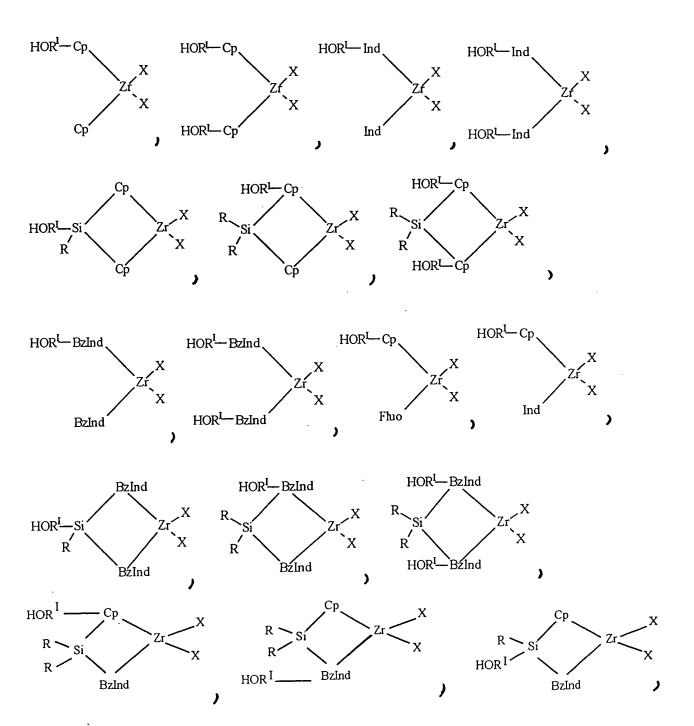
**BzInd** is benzoindenyl optionally substituted with  $C_1-C_{20}$  alkyl,  $C_3-C_{20}$  cycloalkyl,  $C_6-C_{20}$  aryl,  $C_3-C_{20}$  alkenyl,  $C_7-C_{20}$  arylalkyl,  $C_8-C_{20}$  arylalkenyl, or  $C_7-C_{20}$  alkylaryl; {and}

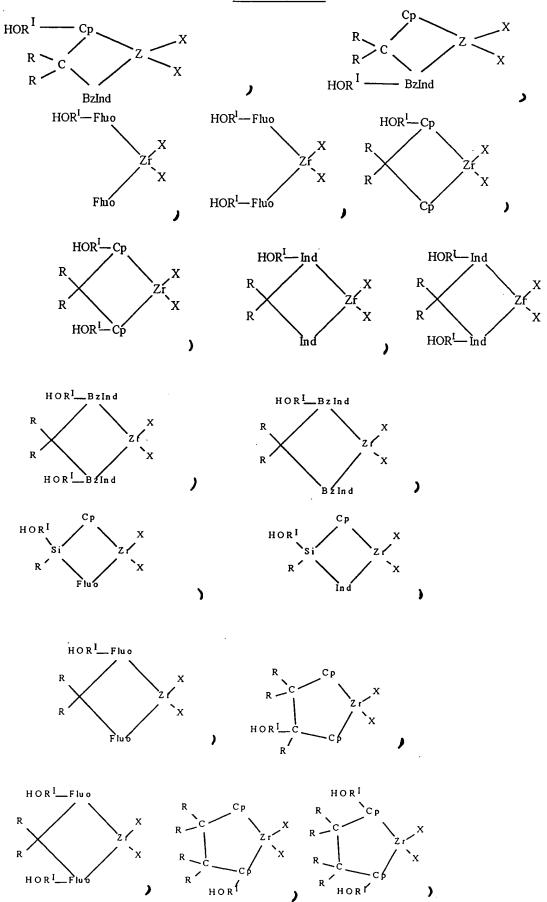
 $\label{eq:Fluo} \textbf{Fluo} \ \ \text{is a fluorenyl ring optionally substituted with $C_1$-$C$_{20}$ alkyl, $C_3$-$C$_{20}$ cycloalkyl, $C_6$-$C$_{20}$ aryl, $C_3$-$C$_{20}$ alkenyl, $C_7$-$C$_{20}$ arylalkyl, $C_8$-$C$_{20}$ arylalkenyl, or $C_7$-$C$_{20}$ alkylaryl$; and $C_7$-$C$_{20}$ alkylaryl$.$ 

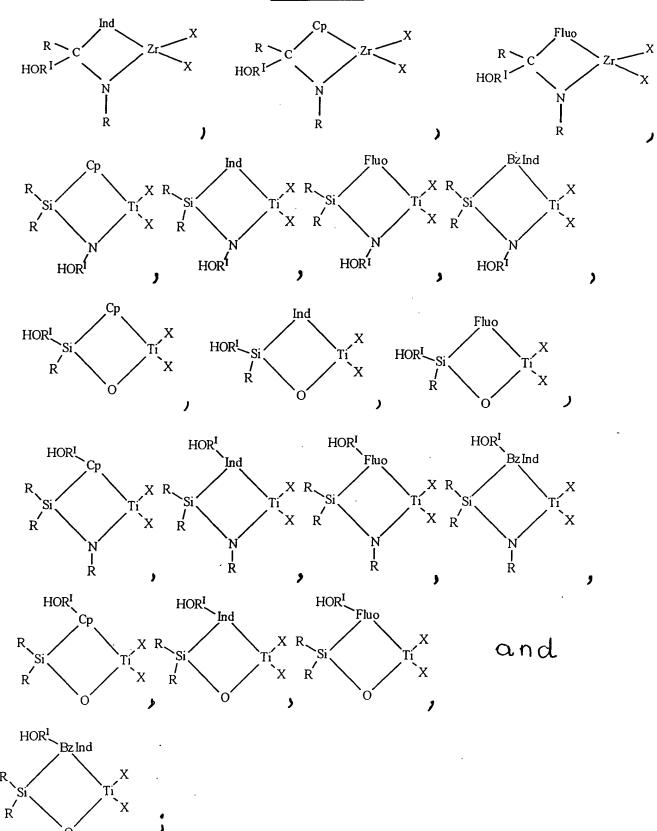
# Cp\* is



19. (amended once) A {heterogeneous} catalytic component as claimed in Claim 6, wherein the metallocene compound is selected from the group consisting of:







wherein:

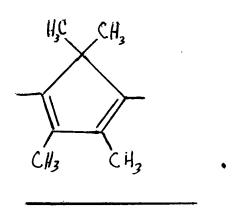
 $\{\mathbf{C_p}\}$   $\underline{\mathbf{Cp}}$  is cyclopentadienyl optionally substituted with  $C_1-C_{20}$  alkyl,  $C_3-C_{20}$  cycloalkyl,  $C_6-C_{20}$  aryl,  $C_3-C_{20}$  alkenyl,  $C_7-C_{20}$  arylalkyl,  $C_8-C_{20}$  arylalkenyl, or  $C_7-C_{20}$  alkylaryl;

Ind is indenyl optionally substituted with  $C_1$ - $C_{20}$  alkyl,  $C_3$ - $C_{20}$  cycloalkyl,  $C_6$ - $C_{20}$  aryl,  $C_3$ - $C_{20}$  alkenyl,  $C_7$ - $C_{20}$  arylalkyl,  $C_8$ - $C_{20}$  arylalkenyl, or  $C_7$ - $C_{20}$  alkylaryl;

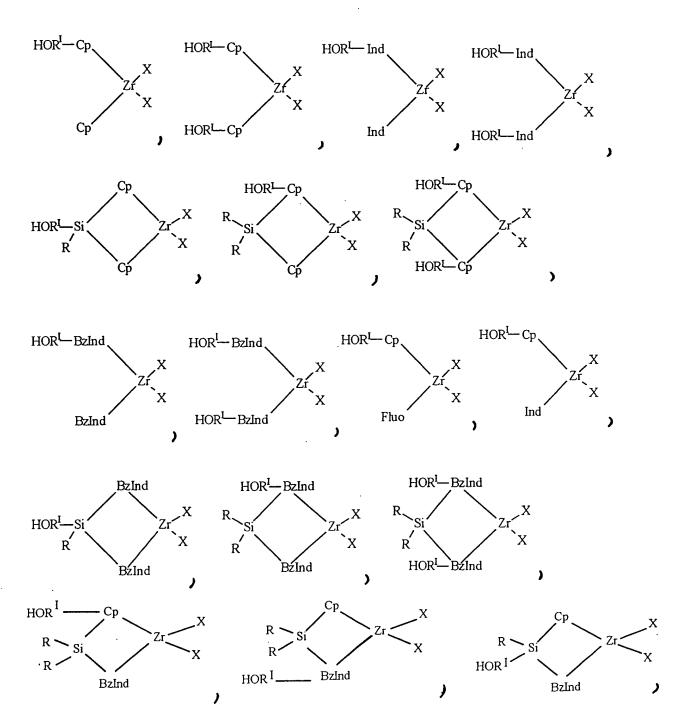
**BzInd** is benzoindenyl optionally substituted with  $C_1$ - $C_{20}$  alkyl,  $C_3$ - $C_{20}$  cycloalkyl,  $C_6$ - $C_{20}$  aryl,  $C_3$ - $C_{20}$  alkenyl,  $C_7$ - $C_{20}$  arylalkyl,  $C_8$ - $C_{20}$  arylalkenyl, or  $C_7$ - $C_{20}$  alkylaryl; {and}

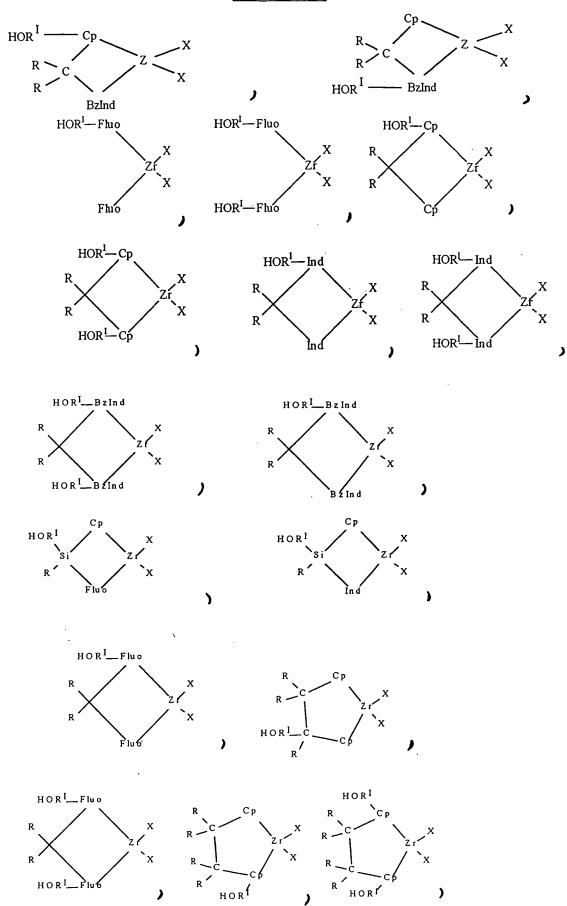
 $\label{eq:Fluo} \textbf{Fluo} \text{ is a fluorenyl ring optionally substituted with $C_1$-$C$_{20}$ alkyl, $C_3$-$C$_{20}$ cycloalkyl, $C_6$-$C$_{20}$ aryl, $C_3$-$C$_{20}$ alkenyl, $C_7$-$C$_{20}$ arylalkyl, $C_8$-$C$_{20}$ arylalkenyl, or $C_7$-$C$_{20}$ alkylaryl; and $C_9$-$C$_{20}$ alkylaryl.$ 

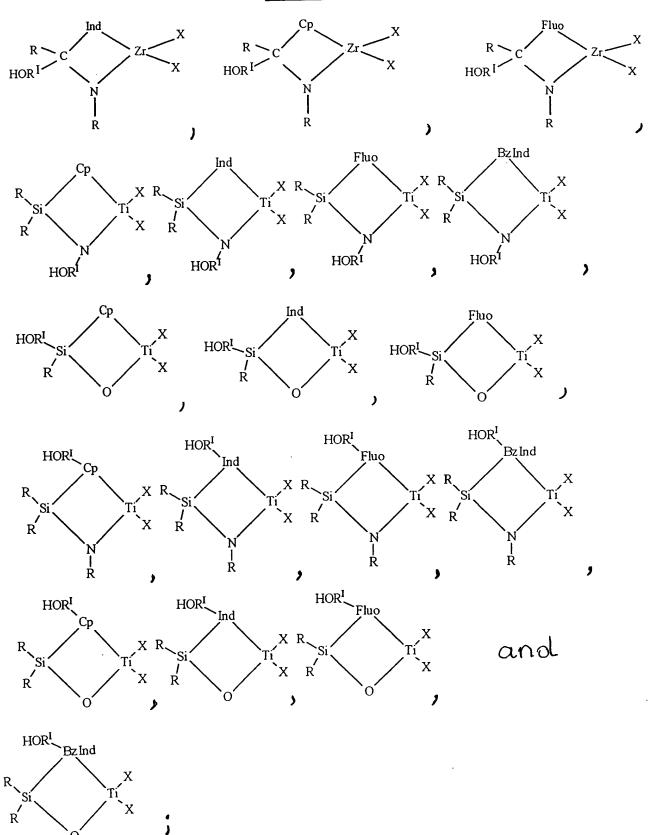
### Cp\* is



20. (amended once) A {heterogeneous} catalytic system as claimed in Claim 8, wherein the metallocene compound is selected from the group consisting of:







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wherein:

 $\{\textbf{C_p}\}$   $\underline{\textbf{Cp}}$  is cyclopentadienyl optionally substituted with  $\text{C}_1\text{-C}_{20}$  alkyl,  $\text{C}_3\text{-C}_{20}$  cycloalkyl,  $\text{C}_6\text{-C}_{20}$  aryl,  $\text{C}_3\text{-C}_{20}$  alkenyl,  $\text{C}_7\text{-C}_{20}$  arylalkyl,  $\text{C}_8\text{-C}_{20}$  arylalkenyl, or  $\text{C}_7\text{-C}_{20}$  alkylaryl;

Ind is indenyl optionally substituted with  $C_1$ - $C_{20}$  alkyl,  $C_3$ - $C_{20}$  cycloalkyl,  $C_6$ - $C_{20}$  aryl,  $C_3$ - $C_{20}$  alkenyl,  $C_7$ - $C_{20}$  arylalkyl,  $C_8$ - $C_{20}$  arylalkenyl, or  $C_7$ - $C_{20}$  alkylaryl;

BzInd is benzoindenyl optionally substituted with  $C_1-C_{20}$  alkyl,  $C_3-C_{20}$  cycloalkyl,  $C_6-C_{20}$  aryl,  $C_3-C_{20}$  alkenyl,  $C_7-C_{20}$  arylalkyl,  $C_8-C_{20}$  arylalkenyl, or  $C_7-C_{20}$  alkylaryl; {and}

Fluo is a fluorenyl ring optionally substituted with  $C_1-C_{20}$  alkyl,  $C_3-C_{20}$  cycloalkyl,  $C_6-C_{20}$  aryl,  $C_3-C_{20}$  alkenyl,  $C_7-C_{20}$  arylalkyl,  $C_8-C_{20}$  arylalkenyl, or  $C_7-C_{20}$  alkylaryl; and

Cp\* is

